

# Race, ethnicity and the epidemiology of sexually transmitted infections

Volume I

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# Abstract

Variations in the incidence and prevalence of diagnosed sexually transmitted infections (STIs) across racial and ethnic groups have been described in many western industrialised settings. The reasons for these variations are unclear. However, an understanding of their determinants is required in order to develop and refine targeted HIV/STI prevention interventions.

This thesis brings together a collection of studies exploring the relationship between ethnicity and the epidemiology of STIs (including HIV infection). It is divided into three main sections. Section one outlines the aims and objectives of the thesis; explores concepts of race and ethnicity; provides an historical and demographic overview of Black and ethnic minority communities in Britain; and critically reviews and summarises the research evidence in this field. Section two outlines the rationale, methodology and outcomes of four studies developed to explore and quantify the nature and range of *ethnic* variations in sexual health outcomes in Britain. The concluding section summarises key themes arising from this work and relates findings back to set objectives.

This thesis confirms the existence of variations in the prevalence of diagnosed STIs among Britain's main ethnic groups. The inequalities are found across a variety of settings, for both reported and prevalent diagnosed infections. Compared with the ethnic majority, adverse sexual health outcomes are more prevalent among Black British ethnic groups, and less so among Indians and Pakistanis. The collated studies confirm that ethnic differences in the prevalence and distribution of high-risk behaviours exist (particularly among men) and may, to a large extent, explain the variations in adverse outcomes. However, behaviour alone cannot account for the observed differences. Other factors, including patterns of health-seeking behaviour, genetic susceptibility, patterns of sexual mixing and background prevalence of disease also contribute, to the observed variations in incidence. Recommendations for future studies and interventions in this field are made.

# Declaration

This is to certify that

- 1) The thesis comprises only my original work towards the PhD except where indicated in the Preface and in Chapter Summaries.
- 2) Due acknowledgement has been made in the text to all other material used.
- 3) The thesis is less than 100,000 words in length, exclusive of tables, references and appendices

Signed

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Kevin A. Fenton

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# List of abbreviations

<b>AC</b>	Afro Caribbean
<b>BA</b>	Black African
<b>CAPI</b>	Computer Assisted Personal Interview
<b>CASI</b>	Computer Assisted Self Interview
<b>CBO</b>	Community Based Organisation
<b>CIN</b>	Cervical Intraepithelial Neoplasia
<b>CT</b>	Chlamydia trachomatis
<b>EMB</b>	Ethnic Minority Boost
<b>EU</b>	European Union
<b>FPC</b>	Family Planning Clinic
<b>GC</b>	Gonorrhoea
<b>HAART</b>	Highly Active Antiretroviral Therapy
<b>HBV</b>	Hepatitis B Virus
<b>HCV</b>	Hepatitis C Virus
<b>IDU</b>	Injecting Drug Use®
<b>LCR</b>	Ligase Chain Reaction
<b>MLR</b>	Multiple Logistic Regression
<b>MSM</b>	Men who have sex with men
<b>Natsal</b>	National Survey of Sexual Attitudes and Lifestyles
<b>NGU</b>	Non gonococcal urethritis
<b>NHB</b>	Non Hispanic Blacks
<b>NHS</b>	National Health Service
<b>NHW</b>	Non Hispanic Whites
<b>OR</b>	Odds Ratio
<b>PPNG</b>	Penicillinase Producing <i>Neisseria gonorrhoeae</i>
<b>SD</b>	Standard Deviation
<b>STI</b>	Sexually Transmitted Infections
<b>TV</b>	Trichomonas vaginalis
<b>VCT</b>	Voluntary counselling and testing

# **Section 1**

## **Introduction and Background**



# Chapter 1.

## Introduction

### 1.1 BACKGROUND

Sexually transmitted infections (STIs) are a major public health problem (Aral & Holmes 1991) (Adler *et al.* 1996). They place tremendous health, emotional and financial burdens upon those infected, their partners, and, through vertical transmission, the unborn child (Adler, Foster, Richens, & Slavin 1996). The morbidity associated with STIs are substantial, with women, those with high rates of partner change and those with poor access to curative health services, being disproportionately affected (Bhopal 1997; Bhopal 2002; Bhopal & Donaldson 1998; Bhopal & Rankin 1999).

Currently, over one million patient episodes, and over 600,000 new STI diagnoses, are recorded in Genitourinary Medicine (GUM) clinics in the United Kingdom every year (PHLS 2001). This represents a substantial increase in diagnosed STIs over the past decade. Between 1990 and 1999, GUM clinic reports rose by 76% for genital chlamydial infection, 55% for gonorrhoea, 54% for infectious syphilis and 20% for genital warts (PHLS 2001; PHLS 2000). These increases may reflect increased patient throughput and testing with more sensitive diagnostic tests (HIV and STD Division 1995; PHLS 2000; Pimenta & Fenton 2001; Simms *et al.* 2001). They are also likely to reflect true increases in disease incidence driven by population-wide increases in high-risk sexual behaviour (Johnson *et al.* 2001; Wellings *et al.* 2001d).

STIs are not randomly distributed in the population, but disproportionately affect those with 'high-risk' sexual lifestyles (e.g. high rates of sex partner change, poor or inconsistent condom use, concurrent sexual partnerships) (Aral *et al.* 1999; Wasserheit & Aral 1996). In addition, social factors, such as patterns of health-care utilisation, access to preventive and

curative health services, levels of education and awareness about STDs and safer sex, are also important determinants of disease transmission (Brandt 1987; Brown, Vessey, & Harris 1984; Ross 1982; Thomas & Thomas 1999; Wasserheit & Aral 1996). Since many of these social determinants also drive wider health inequalities (Davey Smith, Bartley, & Blane 1990; Townsend & Davidson 1982), similar population sub-groups, e.g. ethnic minorities and the economically deprived, are often disadvantaged by poor general health as well as by poor sexual health outcomes (Brandt 1987; Johnson 1988).

It is perhaps from this point that the initial interest in race, ethnicity and sexual health has emerged, with its subsequent development reflecting concomitant expansions in our understanding of the epidemiology of STIs (including HIV infection); the increasing importance of health inequalities on the political agenda; and the growth in community empowerment, patient activism and advocacy movements.

## **1.2 RATIONALE FOR INTEREST**

### **1.2.1 Evolution of global STI epidemics**

The emergence and evolution of the HIV/AIDS pandemic over past two decades have driven a rapid growth in the fields of HIV and STI epidemiology, surveillance and research. Greater willingness to include ethnicity as a variable in epidemiological research and surveillance programmes, albeit with some reservations (Bhopal 2002; De Cock & Low 1997; Fenton, Johnson, & Nicoll 1997), has also contributed to an expansion in this field. More recent studies have confirmed the existence of disparities in STI prevalence across a range of population sub-groups, especially in western industrialised states (Fenton *et al.* 2001; Johnson *et al.* 1994; Laumann, Youm, & Aral 2000; Zierler & Krieger 1997). Academic investigation into the nature and range of these inequalities has evolved over time, from the earlier, largely descriptive studies of racial variations in disease outcomes among clinic attenders (Hahn *et al.* 1989; Menendez *et al.* 1989; Tanfer, Cubbins, & Billy 1995), to more recent large-scale, population-based studies of ethnic variations in sexual health outcomes (Johnson *et al.* 2001; Laumann *et al.* 1994).

### **1.2.2 Present and worsening health inequalities**

Identifying and reducing health inequalities has been a major evolving paradigm of public health practice and research over the past two decades with particularly strong movements in the United Kingdom (Davey Smith, Bartley, & Blane 1990; Scott-Samuel 1986; Townsend & Davidson 1982). 'Tackling health inequalities' has been a priority of the current British government since taking office, and is a key strand of its modernisation programme. Sir Donald Acheson's *Independent Inquiry into Inequalities in Health* (Acheson 1998), published in 1998, found that inequalities in health status ranged across geographical areas, social class, gender and ethnicity and that many social class differences had widened over the previous 20 years. The *National Health Service (NHS) Plan* (Department of Health 2000) has given prominence and priority to tackling health inequalities through the actions of the NHS. Accompanying this interest in reducing inequalities has been an expansion of, and investment in, Black and ethnic minority health research.

### **1.2.3 Increasing patient advocacy**

The growth in patient advocacy and activism associated with the HIV/AIDS pandemic has also helped to drive the emerging interest in ethnicity and sexual health. Over the past 20 years, governments throughout Western Europe and North America have encouraged patients to contribute to the planning and development of health services. In England and Wales the involvement of patients is now central to current efforts aimed at improving the quality of health-care, largely based on the belief that involving patients leads to more accessible and acceptable services, and improves the health and quality of life of patients (Department of Health 2000). This view is endorsed by government policy, which states that involving patients leads to 'more responsive services and better outcomes of care' (Department of Health 2000).

Separate to the political developments in this field, however, has been the engagement and growing sense of urgency among communities regarding their own sexual health and the need for intervention. Adverse publicity surrounding the sexual health of Black communities – whether through the uncovering of scandals such as the Tuskegee study on

the natural history of syphilis in African-American men, or resulting from the publication of racially focussed health data (e.g. the United Kingdom African HIV epidemic, AIDS among African Americans (Dicks 1994; Smith *et al.* 2000) or gonorrhoea among Black Caribbean communities in London (Low *et al.* 1997) - have also acted as a major motivating force for community activism. These revelations have resulted not only in communities being shocked by the statistics, but have encouraged them to critically examine the *status quo*; challenge assumptions; and demand that health-care providers and policy makers face up to these neglected epidemics. They have also helped to ensure that a more open debate takes place on racism and racial disparities in sexual health-related research.

### **1.3 THESIS OBJECTIVES**

This investigation was therefore undertaken in order to explore the relationship between race, ethnicity and the epidemiology of sexually transmitted infections. It combines a review of the available literature with quantitative and qualitative research studies. It focuses on, and is placed within, the experiences and contexts of western industrialised states, specifically in the United Kingdom, which are characterised by their large populations of either post-slavery and post-colonial minorities, or by being pluralistic societies with substantial ethnic minority populations. With regard to the outcome of interest, the epidemiology of sexually transmitted infections, the thesis will broadly consider all sexually transmitted infections, including HIV/AIDS, as well as a range of other sexual health outcomes including access to and utilisation of sexual health services. The thesis will not focus on psycho-sexual issues or sexual dysfunction as primary sexual health outcomes.

Key objectives of this investigation are to:

- 1) Place the use of 'race' and 'ethnicity' as variables in epidemiological research in their historical context, and justify the continued use of ethnicity for the studies included herein.
- 2) Undertake a comprehensive review of the available published literature on race and ethnicity as it relates to key sexual health outcomes.

- 3) Describe ethnic variations in sexual health outcomes among Black and ethnic minority communities in Britain within high-risk (GUM clinic attenders); vulnerable (Black Africans); and general population samples.
- 4) Use a community-based, qualitative study to explore perceptions of sexual health services, their use, safer sex and sexual risk behaviour among Britain's ethnic minority communities.
- 5) Finally, critically review the range of methods used in this investigation and to make recommendations for improving the sexual health of Britain's Black and ethnic minorities.

This thesis is divided into three main sections: The first outlines the aims and objectives of the thesis; explores the concepts of race and ethnicity; and provides an historical and demographic overview of Black and ethnic minority communities in Britain. Section two outlines the rationale, methodology and outcomes of four studies developed to explore and quantify the nature and range of *ethnic* variations in sexual health outcomes in Britain. The concluding section summarises key themes arising from this work and relates findings back to set objectives.

# Chapter 2.

## Background

### 2.1 DEFINING RACE, ETHNICITY & CULTURE

#### 2.1.1 Race

In its simplest form race refers to biological differences between groups. It is most visibly manifested in the differences in skin colour, but may also be used to describe other physical characteristics (including hair texture and colour, eye colour, physical appearance etc.).

Definitions and opinions on the concept of race vary widely. Bardot (1996) describes race as 'a concept without scientific validity, an artificial construct used to justify the hierarchical ordering of groups of people and the exploitation of inferior races'. Miles (1993) defines race as being 'nothing objective, but an ideological concept whose use emerged in Europe only after the initiation of, and in order to rationalise, African enslavement by the Europeans' (Miles 1993). As such, race has been, and is frequently used as, a category of inclusion or exclusion that attempts to naturalise the social formation that it characterises. Over time, a variety of groups beyond Blacks, e.g. Jews, Irish, Muslims and Asians have become racialised and, accordingly, subjected to racially derogatory treatment.

Being an easily identifiable and definable term, the usage of race has become so pervasive that society (and researchers) have come to view it as a natural, primary means of grouping humans and understanding differences between them. Throughout much of the 18th, 19th and 20th centuries, it was popular social science practice to see race as an organising principle of social order, and therefore a legitimate criterion for the selection of cases for comparative analyses.

However, the utility and value of race as a classificatory concept is losing ground (Afshari

& Bhopal 2002; Bhopal 1997; Schulman *et al.* 1995). Biological research continues to show substantial genetic homogeneity between racial groups. Furthermore, societal, political and demographic changes within populations leading to increased travel, migration, and mixing between ethnic and socio-economic groups make racial classification increasingly difficult and irrelevant (Bhopal 1997; Senior & Bhopal 1994). As an epidemiological variable, the use of race has been criticised for its conceptual validity, lack of specificity, and association with racism and racialist ideology (Bhopal 1997; Bhopal & Donaldson 1998; Nazroo 1997; Senior & Bhopal 1994).

The use of race also demeans variations in health and health outcomes to its lowest, simplest and most convenient denominator – unchangeable characteristics of the individual – thereby removing much of the responsibility for racism, discrimination or society's role in creating and maintaining these differences (Bhopal 1998; Bhopal 2002). An excellent example of this is the persistent tendency to attribute high rates of hypertension and cardio-vascular disease among African Americans to 'African genes' despite mounting evidence which clearly implicates the environment rather than genes as the root cause of this differential risk (Fordyce 1996).

### **2.1.2 Ethnicity**

Ethnicity, a broader term, is used to define group identity based on a shared set of biological, cultural and socio-political characteristics (Afshari & Bhopal 2002; Benzeval, Judge, & Smaje 1995; Bhopal 2002; Bhopal & Rankin 1999; Fenton, Johnson, & Nicoll 1997; Wyatt 1991). An ethnic group is a segment of a larger society whose members are thought, by themselves or others, to have a common origin, share important segments of a common culture and in addition, participate in shared activities in which the common origin and culture are significant ingredients (Yinger 1994).

The value of ethnicity varies with context (Wallman 1996). It may be a resource, liability or without any alliance of any kind, depending upon the environment, and other things happening within it. Thus, being an ethnically mixed population is not necessarily predictive of whether or how ethnicity is defined on a day-to-day basis. As Hall (1992) has argued,

with ethnicity, '...the implication is that there are a range of identities (including ethnicity) that come into play in different contexts and therefore identity should neither be regarded as secure, coherent nor static for that matter'.

Wallman (1996) argues that ethnicity is not about cultural difference as such, but is best understood as the 'sense of difference', which can occur when members of a particular cultural, tribal or national group interact with non-members. A person therefore cannot be ethnic by themselves, or even among others from the same background. Thus group cohesion is enhanced by the ability to pinpoint or identify others, and ethnicity may perhaps be best viewed as an 'external definition' imposed on ethnic minority people by the majority - and therefore used to signify 'the other'(Jenkins 1996). This then permits the construction and maintenance of boundaries of exclusion and hierarchical relationships.

However, the creation of such boundaries - 'us and them' is not necessarily negative (Jenkins 1996). An 'internal definition' of ethnicity allows groups to establish their own identity so that relationships between ethnic groups are 'not necessarily hierarchical, exploitative and conflictual'. Ethnic identity can also form a political resource (Modood *et al.* 1997) particularly when ethnic assertiveness arises out of feelings of not being respected or lacking access to public space.

The relevance of ethnicity to health lies in its intimate association with cultures or socialisation processes, which determine a variety of health determinants (the food we eat, the partners we chose, the family and community support we receive) (Fenton, Johnson, & Nicoll 1997). It is these cultural factors which, through endogamy or affiliation, determine the cohesion within groups leading to group identification, but concomitantly, the clustering of biological and lifestyle risks within that group. It is of vital importance, therefore, to understand the factors that bind groups together as ethnic, and the biological consequences of this.

### **Types of ethnicity**

Erickson (1993) distinguishes five types of ethnicity-making situations (Box 1), which provide a useful context for this thesis, as well as a theoretical and historical understanding



of ethnicity in today's societies. Each typology is associated with specific historical circumstances which in turn shape the current status and position of ethnic minorities. Thus, the minority ethnic groups of cities in North America, South America and Europe are a consequence of people moving voluntarily towards new opportunities in trade and employment. In contrast, land dispossession throughout the Americas and many parts of Africa is a central feature of indigenous minorities with an accompanying demeaning and devaluation of culture and language loss (Fenton 1999).

### Box 1 Typology of modern ethnicities

Ethnicity	Description	Example
<b>Urban minorities</b>	Migrant worker populations in American and European cities and in the economies of newly industrialised states	<ul style="list-style-type: none"> <li>❖ Migrant workers from Eastern Europe</li> <li>❖ Chinese merchants in the Caribbean</li> </ul>
<b>Proto-nations or ethno-national groups</b>	People who have and make a claim to be nations and thus make a claim to some form of self governance within a wider state	<ul style="list-style-type: none"> <li>❖ Basques in Spain</li> <li>❖ Quebecois in Canada</li> </ul>
<b>Ethnic groups in plural societies</b>	Descendants of populations who have migrated as coerced, voluntary or semi-voluntary workers and now form large minorities	<ul style="list-style-type: none"> <li>❖ Black Caribbean, Indian and Pakistani ethnic groups in Britain</li> <li>❖ Chinese in Malaya</li> </ul>
<b>Indigenous minorities</b>	People dispossessed by colonial settlement	<ul style="list-style-type: none"> <li>❖ Aboriginal people of Australia</li> <li>❖ Maori of New Zealand</li> <li>❖ Native Americans in the United States</li> </ul>
<b>Post-slavery minorities</b>	The black, African descendants of people formerly enslaved in the New World	<ul style="list-style-type: none"> <li>❖ African Americans in the United States</li> </ul>

Source: Adapted from Erickson (1993)

### Relating race and ethnicity

In many cases race, as well as language, religion and ancestral homeland, help to mark the boundaries of an ethnic group. The extent of racial homogeneity within an ethnic group can vary from nearly complete to slight (Yinger 1994) and may also vary in time and place (Afshari & Bhopal 2002). For example, ethnic groups that are seen as races are often those that have been brought into a society and integrated into its labour force at the bottom levels by coercion and/or violence.

However, where behaviour, attitude and culture are topics of discussion, the use of race is generally inappropriate, and ultimately, most writers give more credence to the concept of ethnicity than race. Ethnicity reflects self-identification with cultural traditions that provide strength, meaning and boundaries between groups. Nazroo (1997) therefore argues that ethnicity and ethnic identity cannot be considered as fixed, because culture is not an autonomous and static feature in an individual's life. Cultural traditions are historically located and occur within particular contexts and change over time, place and person. Ethnicity is one element of identity, whose significance depends on the context within which the individual finds themselves.

### **2.1.3 Culture**

The term 'culture' is often used to describe the system of shared beliefs, values, customs, behaviours, and artefacts that the members of society use to cope with their world and with one another, and that are transmitted from generation to generation through learning (Nazroo 1997). Culture is shared, learned, symbolic, transmitted cross-generationally, adaptive, and integrated.

According to Samovar and Porter (1994), culture refers to the cumulative deposit of knowledge, experience, beliefs, values, attitudes, meanings, hierarchies, religion, notions of time, roles, spatial relations, concepts of the universe, and material objects and possessions acquired by a group of people in the course of generations through individual and group striving.

Culture involves at least three components: what people think; what they do; and the material products they produce. Thus, mental processes, beliefs, knowledge, and values are parts of culture (Samovar & Porter 1994). Some anthropologists would define culture entirely as mental rules guiding behaviour, although often wide divergence exists between the acknowledged rules for correct behaviour and what people actually do.

### **2.1.4 Using race and ethnicity in epidemiological research**

Racial categorisation has been historically used as a variable in epidemiological and social

research. Alleged benefits include the ability to detect variations in health across racial groups, investigate disease aetiology and inform targeted interventions. However, its use has been criticised (Bhopal 1997; McKenzie & Crowcroft 1996; McKenzie & Crowcroft 1994; Senior & Bhopal 1994). Racialisation of health and health outcomes tends to be reductionist. It attributes observed differences to 'physical characteristics' rather than social or economic factors which may be stronger determinants of the outcome of interest (Senior & Bhopal 1994; Wyatt 1991). Racial categorisation may also reinforce racial stereotypes, and in fields such as sexual health, leads to wariness among communities about researchers' intentions and values (Ross 1998). Others (Fenton, Johnson & Nicoll 1997; Afshari & Bhopal 2002; Senior & Bhopal 1994; Nazroo 1997) argue that given the rich cultural diversity in Britain today, knowing that disease prevalence is higher among 'Black' people is of limited use for targeting interventions.

Concerns also exist around the definition and measurement of allied explanatory variables (e.g. ethnicity, country of birth) (Afshari & Bhopal 2002; Senior & Bhopal 1994). Crude approaches, such as using broad racial categories e.g. Black or South Asian, are often used to group disparate individuals, with distinct religious, migration, socio-economic and geographic histories (Bhopal 1997; Senior & Bhopal 1994; Wyatt 1991). Consequently, interpreting results as if members of these composite groups form a homogenous population may be erroneous.

Another limitation of using 'race' as an epidemiological variable is that such inquiry often leads to the assumption that resultant differences between groups must suggest genetic or cultural factors (often based on stereotypes) (Bhopal 1997; Nazroo 1998). Thus ethnicity, however measured, equals genetic, cultural or behavioural heritage. This may consequently lead to a form of implicit or explicit victim blaming, where the inherent characteristics of the ethnic minority group are seen to be at fault and in need of rectifying – a process of racialisation of ill health.

In an effort to overcome some of these limitations, the use of ethnicity, as opposed to race, as an epidemiological variable has been advocated (Senior & Bhopal 1994; Wyatt 1991). Although by no means ideal, it is seen as one method of incorporating and measuring the

influence of cultural factors on health experience and outcomes. Nazroo (1997) argues that to date, the application of ethnicity in British epidemiological research may be classified into three main areas:

- 1) To understand and investigate diseases (usually chronic diseases), which are typically of high prevalence within countries of origin e.g. coronary heart disease (Chaturvedi, Marmot, & McKeigue 1994; Chaturvedi, McKeigue, & Marmot 1993; Sharp *et al.* 1995), diabetes (Chaturvedi, McKeigue, & Marmot 1994; Cronin *et al.* 1994; Greenhalgh, Helman, & Chowdhury 1998) and hypertension (Chaturvedi, Marmot, & McKeigue 1994; Chaturvedi, McKeigue, & Marmot 1993; Sharp *et al.* 1995) or which are typically seen as being genetically associated with particular communities e.g. sickle cell disease.
- 2) To investigate diseases which appear to be part of the spectrum of ill health faced by minorities who have migrated to the UK e.g. mental ill-health.
- 3) To investigate conditions identified as the spectrum of easily preventable conditions that appear to come as part of sexual health (including STDs, HIV and reproductive health).

### **2.1.5 Recommendations for using ‘ethnicity’**

In an attempt to improve and standardise the use of ethnicity as a variable in epidemiological studies, several authors, journals, research and service institutions have developed guidelines and recommendations (summarised in Box 2) for the use of ethnicity and race in health related research (Bhopal 1997). The author has attempted to adhere to these principles as far as possible in the preparation of this thesis.

**Box 2. Recommendations on the use of ethnicity and race in health**

- Researchers, policy makers and professionals in the field of race, ethnicity and health should understand the history of the concept of race and the role of science.
- Ethnicity should be perceived as being different from race. Ethnicity's complex and fluid nature should be appreciated. The limitations of methods of classifying ethnic groups should be recognised.
- Researchers need to state their understanding of ethnicity and race, describe the characteristics of both the study and comparison populations and provide and justify the ethnic coding.
- Investigators should recognise the potent influence of their personal values, including ethnocentricity.
- Socio-economic differences should be considered as an explanation of difference in health between ethnic groups.
- Ethnicity's fluid and dynamic nature means that results should not be generalised except with great caution.
- Results should be applied to the planning of health services.
- Observation of variations in disease should be followed by detailed examination of the relative importance of environmental, lifestyle, cultural and genetic influences.
- Race and ethnicity data, as for social class, have a key role in raising awareness of inequalities and stimulating policy and action.

Source: Adapted from a variety of sources including (Senior & Bhopal 1994)

**2.2 BRITAIN'S BLACK & ETHNIC MINORITIES**

The primary research studies presented in this thesis are all set in Britain. This section provides an update and contextual information on the history and socio-demography of Britain's ethnic populations.

**2.2.1 The historical context**

A shortfall in the labour supply created by the expansion of the post World War Two (WW II) British economy provided the 'pull' for migrant labour (Peach Ceri 1965; Peach Ceri 1968). In the expanding economy, white British workers moved to satisfy the demand for labour in the more attractive jobs. Migrant workers filled their places as a 'replacement population' (Peach Ceri 1968).

The first large-scale migration of people of minority ethnic origin came from the Caribbean shortly after the WWII and during the 1950s. Immigrants from India and Pakistan arrived mainly during the 1960s. Many people of African-Asian descent came to the United

Kingdom as refugees from Uganda during the 1970s. Most Chinese and Bangladeshi people came to Britain during the 1980s and the majority of Britain's Black African communities arrived during the 1980s and 1990s.

The recruitment of Black and Asian migrant workers in the 1950s and 1960s to the least desirable sectors of the British labour market arguably set in motion a cycle of disadvantage, with the disadvantage experienced by migrant workers, inhibiting the opportunities of their sons and daughters (Iganski & Payne 1996). Many were employed as 'second best' in jobs which White workers were insufficiently willing to fulfil. The jobs were usually in industries where pay and status were losing ground (e.g. public transport), or considered unpleasant by the host community (e.g. work in foundries), or that entailed working long and awkward hours (Pose 1969). For the original migrant workers, factors such as the industrial and geographical settlement, occupational and educational skills, the types of jobs in which they were initially employed and discriminatory treatment by employers have all contributed to their contemporary experiences of life in Britain.

The post war experience in Britain, where migrants took the least desirable jobs, is no different from earlier migrations of white ethnic groups, and patterns of migration in other countries. However 'race discrimination' played a key role in the experiences of migrant labour during this period (National Committee for Commonwealth Immigrants 1968; Patterson 1963; Patterson 2001; Wright 1968).

Racial discrimination can also go a long way to explain why first-generation migrant workers found themselves located and trapped at the bottom of the occupational ladder and therefore in the lower socio-economic groups in official statistics. Quality of housing, standard of health, enjoyment of leisure activities and indirectly the occupational opportunities of children are all dependent upon employment opportunities.

Nevertheless, there is now increasing evidence which suggests that upward socio-economic mobility among Britain's ethnic minorities has occurred (Modood 1991), and in some cases faster than the white ethnic groups (Iganski & Payne 1996).

### **2.2.2 Ethnic minorities in Britain today**

#### **Demography**

Data from the 2001 UK national census (National Statistics 2004) provides the most up-to-date information on the distribution and social circumstances of Britain's Black and ethnic minority communities. In mid-2003, the UK was home to 59.6 million people. The average age was 38.4 years, and increase on 1971 when it was 34.1 years. One in five people in the UK are under 16 and one in six people are aged 65 or over. The mid-2003 population of the constituent countries of the United Kingdom is estimated as follows: England 49,855,700 (83.7% of the total UK population); Scotland 5,057,400 (8.5%); Wales 2,938,000 (4.9%); and Northern Ireland 1,702,600 (2.9%).

Eighty-seven per cent of the population of England and 96% of the population of Wales gave their ethnic origin as White British. White Irish people make up 1.2% of the population of England and Wales as a whole, with the highest proportion in the London borough of Brent (6.9% of the population). The largest proportions of White Other (that is, not White British or White Irish) people are in central London, particularly the borough of Kensington and Chelsea (25.3%).

London has the highest proportion of people from all minority ethnic groups apart from those of Pakistani origin, of whom there is a higher proportion in Yorkshire and the Humber (2.9%) and the West Midlands (2.9%). Two per cent of the population of England and Wales are Indian, with Leicester having the highest proportion (25.7%). Bangladeshis formed 0.5% of the population of England and Wales, with the highest proportion in the London borough of Tower Hamlets (33.4%).

In England and Wales, 1.1% of people are Black Caribbean, 0.9% are Black African and a further 0.2% are from Other Black groups. Black Caribbeans form more than 10% of the population of the London boroughs of Lewisham, Lambeth, Brent and Hackney. Over 10% of Southwark, Newham, Lambeth and Hackney are Black African. Chinese people form more than 2% of the population in Westminster, Cambridge, City of London and Barnet. The largest proportions of people of Mixed origin are in London, with the exception of

Nottingham, where two per cent of people are Mixed White and Black Caribbean.

### **Geographic distribution**

Minority ethnic groups are more likely to live in England than in the other countries of the United Kingdom (National Statistics 2004). In England, they make up 9% of the total population compared with only 2% in both Scotland and Wales and less than 1% in Northern Ireland.

Britain's ethnic minority populations are concentrated in the large urban centres. Nearly half (45%) of the total minority ethnic population live in the London region, where they comprise 29% of all residents. After London, the second largest proportion of the minority ethnic population lives in the West Midlands (with 13% of the minority ethnic population), followed by the South East (8%), the North West (8%), and Yorkshire and the Humber (7%). The English regions that contain the smallest proportion of the minority ethnic population are the North East and the South West where they make up only 2% of each region's population.

Approximately 78% of Black Africans and 61% of Black Caribbeans currently live in London. More than half of Bangladeshis (54%) also live in London. Other ethnic minority groups are more dispersed. Only 19% of Pakistanis reside in London, 21% live in the West Midlands, 20% in Yorkshire and the Humber, and 16% in the North West.

### **Socio-economic conditions**

People from minority ethnic groups are more likely than white people to live in low-income households (National Statistics 2004), and there is considerable variation among the different minority ethnic groups. Pakistanis and Bangladeshis are much more likely than other groups to be living on low incomes. Almost 60% of the one million people in this group are living in low-income households (before housing costs are deducted).

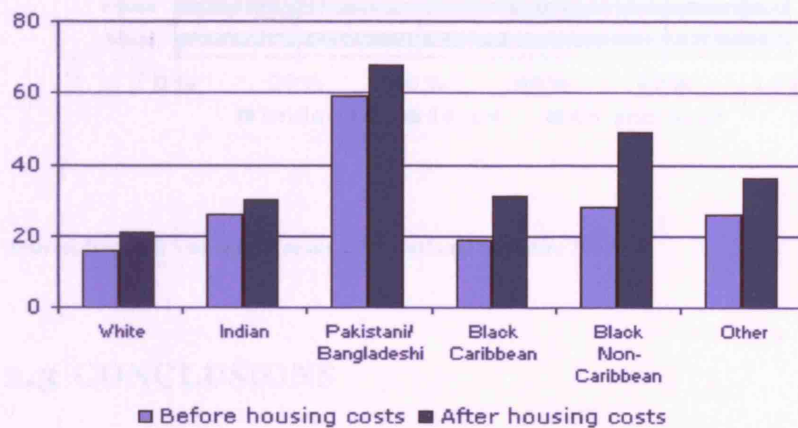
A substantial proportion (49%) of Black non-Caribbean households also live on low incomes after housing costs are deducted (National Statistics 2004). However, the risk of low-income for this group is much less pronounced in comparison with other ethnic groups



if income before housing costs is used. The white population is least likely to be living in low-income households - 16% did so before housing costs are deducted and 21% after housing costs.

**Figure 1 Households on low-income: by ethnic group of head of household, 2001/02**

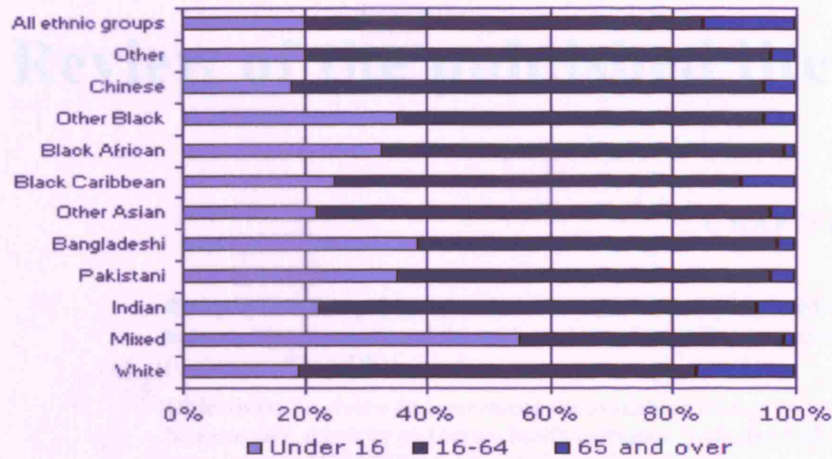
Great Britain  
Percentages



Source: National Statistics. Census 2001(National Statistics 2004)

### Age distribution

Minority ethnic groups have a younger age structure than the white population, reflecting past immigration and fertility patterns (Figure 2 overleaf). The Mixed group has the youngest age structure - more than half (55%) are under the age of 16. Bangladeshis also have a young age structure, with 38% aged under 16. This is double the proportion of the White group where only 19% are under the age of 16. In contrast, the White group has the highest proportion of people aged 65 and over at 16%. Nine per cent of Black Caribbeans are aged 65 or over, reflecting the first large-scale migration to Britain back in the 1950s (National Statistics 2004).

**Figure 2 Age distribution: by ethnic group, 2001/02****United Kingdom**

Source: National Statistics. Census 2001(National Statistics 2004)

## 2.3 CONCLUSIONS

This introductory chapter explored the concepts of race, ethnicity and culture, and critically examined their utility and usage in epidemiological research. The recent published literature urges caution in utilising race as an explanatory variable in health research, and encourages transparency in defining why and how ethnicity is used. There is a growing consensus towards using ethnicity (rather than race) in epidemiological research provided it is well defined, measurable and contextualised. Guidelines of good practice for utilising ethnicity in health research have been proposed and will be adhered to throughout this work. Finally, the chapter provided a brief overview of ethnic minorities in Britain – their historical context, socio-economic realities and main demographic characteristics.

# Chapter 3.

## Review of the published literature

### CHAPTER SUMMARY

**Background:** Few published studies have systematically explored the relationship between race, ethnicity and the epidemiology of sexually transmitted infections (including HIV/AIDS).

**Objectives:** To review and summarise the available evidence on the relationship between race, ethnicity and sexual health outcomes (including high-risk sexual behaviours and HIV/STI incidence and prevalence).

**Methods:** Comprehensive review of all publications describing studies of race, ethnicity and the epidemiology of bacterial and viral STIs (including HIV/AIDS) using MEDLINE, EMBASE, PSYCHLIT from 1967 to December 2002. Searches restricted to English language articles. Secondary searches were also undertaken.

**Results:** Substantial heterogeneity exists in the definition and use of race and ethnicity in sexual health research. The reviewed studies demonstrated racial and ethnic group differences in the occurrence of STIs, high-risk sexual behaviour and access to curative services. The majority of studies were undertaken with STD/GUM clinic populations. Few probability sample, general population studies have been undertaken. The chapter ends with a critique of the observed studies and an exploration of why the observed differences across ethnic groups may be occurring.

**Conclusions:** The available evidence suggests that racial and ethnic variations in the STI epidemiology, high-risk sexual behaviour, and access to curative services exist. However, the evidence is of variable quality, and highly dependent upon study methodology and setting. There is a need for more rigorous STD/GUM clinic evaluations, qualitative and population based studies in this field.

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**Candidate's contribution to this work:** This literature review was undertaken entirely by the author. It was first undertaken in 1998, then subsequently updated in 2001 and, most recently, in July 2003.

### **3.1 CHAPTER OBJECTIVES**

Although relatively well established in the United States, studies investigating the relationship between race, ethnicity and epidemiology of sexually transmitted infections (including HIV/AIDS) have only recently gained prominence in Western Europe. A comprehensive review of the published literature was therefore undertaken to:

- a) Summarise and review the nature, range and outcomes of studies demonstrating racial and ethnic variations in the distribution and determinants of STIs in western industrialised settings.
- b) Review the current discourse within the published literature for reasons for racial and ethnic variations in the STI incidence and prevalence.

The chapter begins with a consideration of the methodology employed in the comprehensive literature review followed by a critical review of the findings.

### **3.2 METHODS**

Standard methods of critical reviewing research articles were employed (University of York 2001). Prior to commencing the review, a study protocol was developed to define how the review would be undertaken. This included the search strategy to be employed, the criteria for including and excluding studies, the criteria for evaluation and the outcome measures to be included in the review.

All publications describing studies of race and ethnicity were sought through computerised searches in MEDLINE, EMBASE and PSYCHLIT from 1967 to December 2000 (MeSH terms RACIAL-STOCKS, ETHNIC GROUPS– all subheadings). Updates using the same search algorithm were undertaken to November 2001 and July 2003.

All retrieved articles were limited to 'ENGLISH' and 'HUMAN'. For each major disease

area, further exploration was undertaken by predetermined sexual health explanatory and outcome variables (e.g. MeSH terms SEXUALLY TRANSMITTED DISEASES; HIV/AIDS; HEALTH-SERVICES-ACCESSIBILITY; SOCIAL CLASS; SEXUAL MIXING OR NETWORKS etc.).

The retrieved articles were also limited to studies undertaken in western industrialised settings (i.e. Europe, North America and other European settler countries such as Australia and New Zealand). This restriction reflects the shared cultural and religious experiences across the 'West'; the pluralistic nature of their societies characterised by predominantly Caucasian racial majority with substantial populations of indigenous (Native American; Aborigines); post-slavery (African American) or post-colonial (e.g. Asians and Black Caribbeans in Britain) ethnic minorities; continuing net in-migration to these societies of individuals from developing or resource poor settings. These societies have also been at the forefront of acknowledging, describing and tackling inequalities in health outcomes.

Searches were restricted to English language articles. Where appropriate, secondary searches were conducted by reviewing all references quoted in the primary papers for further articles. In total over 279 papers were reviewed.

### **3.2.1 Comparative studies of STI incidence and prevalence among ethnic groups**

All reviews, observational, analytic and experimental studies were initially retrieved. In order to explore ethnic variations in STI incidence and prevalence, only those studies which were taken across multiple ethnic groups were identified, retrieved and summarised. As the majority of reports were observational, a grading scale was not used (Gelbach 1993), but, where appropriate, each article was critically reviewed by the author with consideration of its set objectives, selection of participants, measurement of outcomes and limitations, follow-up methods and use of measures of internal and external validity. In summarising the findings for this chapter, only studies which compare outcomes across ethnic/racial groups

(i.e. comparative studies) are discussed in detail. These findings are presented in Section 3.3.

### **3.2.2 Studies to explain why ethnic variations occur**

In order to summarise the reasons why ethnic variations in sexual health occur, all retrieved papers were reviewed, with special attention being paid to published reviews on this issue. These findings are presented in Section 3.4.

## **3.3 RESULTS I: RACE, ETHNICITY AND THE EPIDEMIOLOGY OF STI**

Discussions about sexual health and ethnicity often include two of society's taboos: sex and race. Variations in sexual health outcomes across racial or ethnic groups raise particular sensitivities including concerns about irresponsible handling and reporting of statistical data, racial stereotyping and stigmatising communities (Fenton, Johnson, & Nicoll 1997). This may explain the relative dearth of surveillance and research data on this issue. In this section, literature review findings pertaining to racial and ethnic variations in sexual health outcomes are presented.

### **3.3.1 Race, ethnicity and HIV/AIDS**

Published studies exploring ethnic variations in the incidence and prevalence of diagnosed HIV infection or AIDS are largely derived from surveillance data from the United States and United Kingdom. The relative lack of studies from other European countries reflects the non-collection of this type of data (De Cock & Low 1997), reporting practices (e.g. the preference for publishing *ad hoc* surveillance reports versus academic papers) and the general reluctance of many European Union (EU) states to report ethnicity data due to its

politically sensitive nature (De Cock & Low 1997). In interpreting surveillance reports, consideration should be given to their source (clinic, death register, laboratory), coverage (sentinel or mandatory) and the methodology employed. Few published studies calculated rates or relative risks to explore disease burden across ethnic groups. Where utilised, rates were problematic, especially for migrant communities which are more likely to be underrepresented in population denominators, thereby inflating disease rates.

### **United Kingdom**

By the end of 2003 there were an estimated 53 000 people living with HIV in the United Kingdom, of whom, 14 300 (27%) were unaware of their infection (The UK Collaborative Group for HIV and STI Surveillance 2004). The total number of HIV-infected patients seen for care in the UK was 37 079 in 2003. Three-quarters of HIV infections, transmitted through heterosexual intercourse, and diagnosed in the UK in 2003 were probably acquired in sub-Saharan Africa.

Black African communities therefore bear the brunt of the UK heterosexual HIV epidemic (The UK Collaborative Group for HIV and STI Surveillance 2004). Both the prevalence of heterosexually acquired HIV infections in the UK, including among pregnant women, and the numbers of new HIV diagnoses reflect the focus of the pandemic in sub-Saharan African countries, and the close socio-demographic links (e.g. through migration, familial ties) to the UK. In England, Wales and Northern Ireland, of the HIV-infected heterosexual patients seen for care in 2003 (and for whom ethnicity was reported), 70% were black-African (The UK Collaborative Group for HIV and STI Surveillance 2004). Over two-fifths of the HIV-infected heterosexuals seen for care reside and are treated outside London; most of these are black-African. Among sub-Saharan African born women giving birth in the UK, an estimated one in 42 were HIV-infected in 2003 (The UK Collaborative Group for HIV and STI Surveillance 2004). However, the transmission of HIV from mother to child in the UK has been reduced greatly since the universal offer and recommendation of HIV testing in pregnancy was introduced (The UK Collaborative Group for HIV and STI Surveillance

2004).

Undiagnosed HIV infection and late diagnosis of longstanding HIV infection continue to be a feature of the treatment histories of black-African men and women, particularly among those attending GUM clinics outside London. Of women born in sub-Saharan Africa attending eight GUM clinics outside London in England, Wales and Northern Ireland, one in 10 had a previously undiagnosed HIV infection (The UK Collaborative Group for HIV and STI Surveillance 2004). Men who have sex with men (MSM) from black and ethnic minorities represent 10% of prevalent diagnosed MSM seen for care, and high levels of undiagnosed HIV infection have been observed among the small sample of those born in Central and South America, the Caribbean, and sub-Saharan Africa (The UK Collaborative Group for HIV and STI Surveillance 2004). The number of diagnoses of HIV and STIs among Asian ethnic groups remains low (The UK Collaborative Group for HIV and STI Surveillance 2004).

Diagnoses of HIV infection attributed to sex between men and women have shown a sustained upward trend in the United Kingdom, and in 2000, for the second year running, there were more new diagnoses in this exposure category (1315) than there were for men who have sex with men, MSM (1096) (The UK Collaborative Group for HIV and STI Surveillance 2004). Further details were obtained for 1067: 833 (78%) were categorised as infected in Africa, and 128 (12%) as infected elsewhere abroad. Eighty-two infections (8%) were categorised as probably acquired within the United Kingdom from individuals themselves heterosexually infected (The UK Collaborative Group for HIV and STI Surveillance 2004).

In 1999, 65% of the UK diagnoses of HIV infections acquired in Africa, and 61% of all the heterosexually acquired infections diagnosed, were in women. The higher proportion of women diagnosed in 2000 partly reflects the promotion of antenatal testing, following the issuing of guidelines on reducing vertical transmission of HIV by the Department of Health in 1993. The only heterosexually infected sub-group where females did not predominate



was among those who acquired their infection abroad outside Africa - 86 of the 128 (67%) diagnoses in this group were in men (The UK Collaborative Group for HIV and STI Surveillance 2004).

Relatively few infections have been diagnosed among South Asian communities in the United Kingdom. This is despite the growing HIV/AIDS incidence in South East Asia, and the continued in migration from affected areas. Britain's Black Caribbean communities occupy an intermediate position with higher AIDS rates than White and Asians, with somewhat higher HIV seroprevalence among GUM clinic attenders (The UK Collaborative Group for HIV and STI Surveillance 2004). Black Caribbean gay and bisexual men attending GUM clinics have the highest HIV seroprevalence – until recently, a fact little reported or discussed in HIV surveillance data.

#### **Other European countries**

AIDS incidence among non-white ethnic minorities and migrant communities varies significantly across the European Union (EU). However, caution should be taken when estimating HIV/AIDS incidence and prevalence in these groups. Migrants with AIDS tend to be overrepresented in the numerator, and many AIDS-free migrants are missing from the official statistics used to calculate the denominator for disease rates, leading to an overestimation of HIV incidence/prevalence among these groups.

By end 1999, Belgium had 1267 (47%) non-nationals among its AIDS cases (Del Amo *et al.* 2004). Belgium also differentiates between 'resident' (defined as living in Belgium 5 or more years before AIDS diagnosis) which account for 66% of all AIDS cases, and 'non-resident', which account for 34% of the total number and which are considered to have possibly been infected outside Belgium. The proportion of non-Belgian AIDS cases is much higher among non-residents (88%) - the majority of whom originate from Sub-Saharan Africa - than among residents (23%). Trend analyses show that while a marked reduction of AIDS cases was observed among residents from 1994 onwards, this decrease was not

observed among non-residents.

By June 1998, France had reported 6571 non-French nationals with AIDS (Del Amo *et al.* 2004). The proportion of non-French national AIDS cases increased from 13% in 1991 to 20% in 1998. Out of these 6571 persons, 31% were from sub-Saharan Africa, 20% were from North Africa and 12% were Haitians. Since the introduction of HAART, AIDS cases in France have decreased markedly but this decrease has been less among non-French nationals<sup>359</sup>. Between 1996 and 1998 there was a drop of 61% in the number of AIDS cases among French nationals and of 44% among non-French nationals.

Germany had, by 1997, 2259 AIDS cases whose nationality was not German, representing 13% of the cumulative number of cases<sup>359</sup>. Of these, 54% were of European and/ or Turkish nationality. Of the remaining 46%, the majority (39%) were Africans, with 26% North Americans, 18% Asians and 13% Latin Americans. In Italy, 2326 AIDS cases were reported among people with nationalities other than Italian by November 2000, accounting for 5% of all cases in Italy. AIDS cases originating from Africa (6%) were the most common non-Italian group affected, followed by those originating from South-America (3%) (Del Amo *et al.* 2004).

By June 2000, Spain had 1076 (2%) people whose country of origin was not Spain (Del Amo *et al.* 2004). The commonest area of origin was Western Europe (27%), followed by Africa (29%) and Latin America (20%). The number of AIDS cases in Spain decreased by 60% since 1994, but this trend was not observed among certain groups, such as people originating from sub-Saharan Africa and North Africa, where the absolute number of cases, though small, was increasing.

Sweden recorded nationality in the past but no longer does so (Del Amo *et al.* 2004). The AIDS surveillance centre publishes AIDS cases possibly infected within or outside of Sweden, as well as the continent in which the infection probably took place. Out of 5400 AIDS cases reported cumulatively to December 2000, 49% were recorded as having been

infected outside Sweden. The most numerous population sub-group was 'individuals probably infected in Africa' (1356 cases, 25%), followed by those probably infected in European countries (excluding Nordic countries) (424 cases, 8%), and in the Americas (329, 6%).

### **United States**

The Centers for Disease Control and Prevention has estimated that between 1,039,000 and 1,185,000 people in the United States were living with HIV by end December 2003. Nearly half of those living with HIV are African American with alarming rates being documented among Black gay men. Surveillance data and *ad hoc* research studies in the United States have shown variations in HIV/AIDS incidence and prevalence between broad racial and ethnic groups (White/ African American/ Hispanic) (Moran *et al.* 1989). (McQuillan *et al.* 1997) estimated the seroprevalence of HIV from the third National Health and Nutrition Examination Survey (NHANES III). The testing was performed anonymously on 11,203 individuals 18-59 years of age examined from 1988 to 1994. Fifty-nine individuals were HIV positive, for an overall prevalence of 0.32%. Black women who used cocaine were 12 times more likely to be HIV positive compared with all tested black women (6.5% vs. 0.55%).

Haverkos *et al.* (1999) used calculated the relative rates of AIDS among racial/ethnic populations using Centers for Disease Control and Prevention HIV reports assuming that racial/ethnic distributions reflect that of the US Census Data from 1990. The overall relative rates were whites--1, African Americans--4.7, Hispanics--3, Asian/Pacific Islanders--0.4, and Native Americans--0.5. The relative rates for African Americans and Hispanics compared with whites were highest for injecting drug users, heterosexual contact, and pediatric patients. Ethnic variations in AIDS indicator illnesses are also observed with extrapulmonary TB being higher among African Americans, Hispanics than Whites and toxoplasmosis being higher in Hispanics compared with African American and Whites (Hu *et al.* 1995).

### **3.3.2 Race, ethnicity and bacterial STIs**

#### **General comments**

Studies describing ethnic or racial variations in the incidence or prevalence of bacterial STIs were the most commonly identified, with *N. gonorrhoeae* and genital *C. trachomatis* infections being the most commonly reported infections. Review of the collated studies indicate a number of consistent features: Most are STD or GUM clinic-based; many use crude racial categorisations (Black, White, Hispanic); few were established to examine ethnic differences *a priori*; few employed multiple logistic regression to adjusted for key demographic variables; and few had collected appropriate sexual behavioural variables. Only a handful of general population probability sample studies, mainly from the US, examining racial or ethnic differences in reported bacterial STIs were found.

#### ***N. gonorrhoeae* infection**

Evidence for ethnic variations in the incidence of gonorrhoea, including antimicrobial resistance patterns, were first identified in the United Kingdom in the 1950s, however more systemic exploration of this issue has been a relatively recent phenomenon (Hughes *et al.* 2000). Two decades ago, (Thin *et al.* 1983) reviewed all cases of gonorrhoea caused by penicillinase producing *Neisseria gonorrhoeae* (PPNG) seen between 1976 and 1983 at an inner London GUM clinic, which accounted for 11% of all such cases reported in that period in the in the UK. Despite stable incidence of gonorrhoea, PPNG incidence rose to 4.4% of all such cases by 1982. A majority 75% of these cases were imported, mainly from Nigeria and Ghana and among Black Africans, but a marked change was seen in the second half of 1982, when 71% of cases were indigenous in origin. Casual partners and prostitutes in London were mentioned as the source of infection by 34% of patients, a much higher percentage than that seen previously.

Rodin *et al.* (1980) analysed the distribution of the sensitivity to penicillin of gonococci isolated from 631 men and 290 women in relation to the racial origin of the patients and the

type of source contact alleged by the men. No difference in the sensitivity patterns was found between strains from white patients from the United Kingdom and those from immigrants from the Caribbean area. Asian men harboured significantly more insensitive strains than men of other racial groups. Men of Caribbean stock who had been born in the UK had significantly more infections due to fully sensitive strains. The authors concluded that the reasons for these variations are not known, but one contributory factor may be differences within the racial groups in the proportions of infections contracted from prostitutes.

More recently, Lacey *et al.* (1997) recorded details of all Leeds Health Authority residents who presented with gonorrhoea at the only GUM clinic serving the city. High disease rates were observed among Black men, and young Black men were at highest risk with incidences of 2-3% per year. The neighbourhoods with the highest rates of infection were inner-city areas with high proportions of ethnic minority groups. After controlling for age, sex and socio-economic group, Black men and women in Leeds were more than 10 times more likely than white men and women, and 50 times more likely than Asian men and women, to have had one or more episodes of gonorrhoea during the observation period (Lacey *et al.* 1997). White men and women were nearly five times more likely than Asians to have had one or more episodes of gonorrhoea during the study period (Lacey *et al.* 1997). A similar study by (Low, Daker-White, Barlow, & Pozniak 1997) in south London found the highest rates of gonorrhoea among young Black men with incidence rates of diagnosed infections of between 1-2%. Women from Black minority ethnic groups had around 10 times the rate of gonococcal infection seen in white women. Inequalities in gonorrhoea rates persisted after adjusting for socio-economic factors, with men from Black minority ethnic groups being 11 times more likely than White groups to acquire gonorrhoea. Both these studies showed membership of a Black racial group to be associated with a higher risk of being diagnosed with gonorrhoea, even after controlling for socio-economic status.

Shahmanesh *et al.* (2000) used a retrospective cross sectional study to investigate core

populations for gonorrhoea transmission in 2 GUM clinics in Birmingham and eight adjacent clinics. They examined all patients with chlamydia (n = 665) or gonorrhoea (n = 584) attending between 1 October 1995 and 30 September 1996 with a postcode within the Birmingham health district. Controls were 727 patients seen in the same period with no infection. Postcodes were used to calculate population prevalence rates per 100,000 aged 15-65 in the 39 wards of the city and to estimate the socioeconomic status using the Super Profile (SP). They found that GUM clinic attenders accounted for 67.6% and 82.5% of all chlamydia and gonorrhoea isolates reported by the laboratories. Both infections were more common in men and in black ethnic groups. However, patients with gonorrhoea only infection were more likely to be of black ethnicity than those with chlamydia only infection ( $p = 0.0001$ ). On logistic regression age < 20 years, male sex, black ethnicity, and living in neighbourhoods with SP J ("have nots") were predictive of both infections compared with controls. Overall chlamydia and gonorrhoea prevalence rates were 129 and 98.4 per 10(5) respectively. Corresponding rates for whites was 64.7 and 37.2 and for black ethnic groups 1105 and 1183 per 10(5) of each ethnic group.

There is some evidence that repeat gonococcal infections in Britain occur more commonly among Black heterosexual GUM patients than other ethnic groups. Sherrard *et al.* (1989) undertook a GUM clinic survey of patients who acquire repeated infections of gonorrhoea attending a central London clinic. During the 3 years 1990 to 1992, 18.8% of patients contributed 35.8% of episodes with a mean time between episodes of 10.5 weeks. Those with repeat infections were more likely to be black and to have had more than one episode of gonorrhoea prior to the study period. They are also more likely to have had 3 or more recent partners.

In the US, Gonorrhoea is reported more commonly among some minorities, with 1988 rates per 100,000 population being 54 for whites, 1,801 for Blacks, and 201 for Hispanics (Centers for Disease Control, 1999). High rates of reinfection are also described in these groups (Thomas *et al.* 1996). Evidence suggests poverty, limited access to health-care, and

exchange of sex for drugs as being major risk factors for transmission, as well as high levels of undiagnosed infection (Wasserheit & Aral 1996; Laumann, Youm & Aral 2000; Aral & Holmes 1995; Thomas *et al.* 1996). (Thomas *et al.* 1996) described the epidemiology of gonorrhoea within a rural county of North Carolina and compared it with the patterns described for large cities. Data include gonorrhoea reports from private physicians and the county health department from August 11, 1992, to August 10, 1993, and ethnographic interviews. The rate among males (1,602 cases per 100,000 person-years) was twice that among females. The risk of reinfection within 6 months of an initial infection (12.9%) was high compared with risks in urban settings. Factors favoring transmission in rural communities include greater poverty and fewer health care resources than in urban settings, the exchange of sex for crack cocaine, and a lack of anonymity that may cause some people to avoid seeking treatment or acknowledging risky sexual behaviors in a clinical setting.

During 1986 and 1987, Handsfield *et al.* (1989) supplemented gonorrhoea case reporting with laboratory surveillance in King County, Washington and correlated incidence rates with demographic variables. They found the overall incidence of gonorrhoea was similar for men and women, but highest for 16- to 21-year-old females and urban Seattle residents. Incidence rates by ethnicity were Blacks, 3033; Native Americans, 843; Hispanics, 617; Asians, 190; and Whites, 121. Census tracts representing the lowest socioeconomic status (SES) quartile accounted for 58% of reported gonorrhoea. Black female teenagers residing in the lowest SES urban areas had highest incidence rates: aged 14 to 15, 3.4%; 16 to 17, 10.4%; 18, 17.0%; and 19, 15.4%. Rates in female teenagers were even higher after adjustment for estimated proportion of those who were sexually experienced.

### **Genital chlamydial infection**

Evidence on ethnic variations in chlamydia epidemiology are largely derived from prevalence studies which are undertaken in a variety of clinical settings including STD,

antenatal, jail (Pack *et al.* 2000), adolescent clinics (Aral *et al.* 1999);(Boyer *et al.* 1999);(Stoner *et al.* 2000);(Chokephaibulkit *et al.* 1997);(Gershman & Barrow 1996);(Ellen *et al.* 1995);(Hillis *et al.* 1994); (Holmes *et al.* 1993); (Workowski *et al.* 1992); (Pabst *et al.* 1992);(Zimmerman *et al.* 1990); (Glenney *et al.* 1988); (Smith *et al.* 1988);(Magder *et al.* 1988); (McCormack *et al.* 1985); (Stamm *et al.* 1984);(Shafer *et al.* 1984); (Eckert *et al.* 2000;Kordova *et al.* 1983;Winter *et al.* 2000). The majority of the reviewed studies were undertaken in the United States. In general higher prevalences have been reported among Black, Hispanic, or other ethnic minority (Hart 1992);(Evans, Bond, & MacRae 1999);(Jolly *et al.* 1995) women compared to White women.

Boyer *et al.* (1999) used a cross sectional survey of consecutive, racially and ethnically diverse sample of 285 sexually experienced youth who were preponderantly female (58.6%) and who were aged 16.7 years on average to determine the role of socio-demographic risk markers and behavioural risk factors associated with sexually transmitted diseases (STDs) in an urban, general health maintenance organization teen clinic. Many of these youth were at high risk for STDs, having a self-reported history of sex with multiple partners (49.1%), sex with a new partner (42.5%), inconsistent use of condoms (71.9%), and frequent substance use (24.5% used marijuana 1-2 times per week or more). Sexually transmitted disease screening revealed that 11.6% of the participants had 1 or more STDs. A logistic regression analysis to determine the best model for predicting STDs indicated that youth who are African American (odds ratio, 3.34; 95% confidence interval, 1.52-7.35), had sexual partners who were 2 or more years older (odds ratio, 2.63, 95% confidence interval, 1.22-5.67), and used marijuana 1 to 2 times or more per week (odds ratio, 2.27; 95% confidence interval, 1.01-5.13) were more likely to have STDs at screening.

(Chokephaibulkit *et al.* 1997) used a retrospective case-control study to examine the prevalence, symptomatology, risk factors, and other infections associated with urogenital chlamydial infection in 596 pregnant teenagers attending for prenatal care clinic in Tennessee. 67 (11.24%) were infected with *Chlamydia trachomatis*. In multivariate analysis,



black race (odds ratio [OR] = 4.01; 95% confidence interval [CI] = 1.74-9.23;  $p = 0.001$ ) and greater gestational age at first prenatal visit (OR = 1.11; 95% CI = 1.04-1.18;  $p = 0.001$ ) were independently associated with chlamydial infection. Age, marital status, number of pregnancies, smoking, alcohol abuse, drug abuse, age at first intercourse, and multiple sex partners were not associated with the infection.

Gershman & Barrow (1996) examined comparative prevalences and predictors of chlamydia and gonorrhoea among Colorado family planning clinic patients using a cross-sectional study of public and private family planning clinic patients in Colorado tested for both chlamydia and gonorrhoea ( $n = 12,926$ ). Among women tested for both infections, the chlamydia prevalence rate was 4.5% and the gonorrhoea prevalence rate was 0.5%. Multivariate analysis showed that independent predictors of chlamydia were age younger than 25 years, black or Hispanic race-ethnicity, cervical friability, mucopus, exposure to a sex partner with chlamydia, or multiple recent sex partners. Independent predictors of gonorrhoea were age younger than 20 years, black or Hispanic race-ethnicity, or exposure to a sex partner with gonorrhoea; adjusted odds ratios for exposure to gonorrhoea and black race were the highest for either infection.

Hillis *et al.* (1994) evaluated risk factors for recurrent *Chlamydia trachomatis* infections in women. using a retrospective cohort design to examine predictors of recurrent infection in the 38,866 female residents of Wisconsin whose first reported *C. trachomatis* infection occurred between 1985 and 1989. They found young age at first reported infection to be the strongest predictor of recurrent *C. trachomatis* infection, after adjustment for covariates. Other characteristics associated with recurrence included black race, coinfection with gonorrhoea, and past sexually transmitted diseases.

Few population based prevalence studies of Chlamydia or gonorrhoea have been undertaken. Mertz *et al.* (1998) conducted a pilot survey of chlamydia prevalence as part of the National Health and Nutrition Examination Survey III (NHANES III) (conducted between 1988 to 1994) was based on a stratified multistage probability sample of the United

States population with oversampling of Non-Hispanic blacks and Mexican-Americans using the ligase chain reaction assay for *C. trachomatis*, we tested urine from 1,144 participants 12 to 39 years of age from 10 of the 89 sites of NHANES III. They found prevalence was higher for non-Hispanic blacks (7%) than for Mexican-Americans (3%) and non-Hispanic whites (2%). Prevalence was higher for women than men in non-Hispanic blacks (7% vs. 6%), Mexican-Americans (5% vs. 2%), and non-Hispanic whites (2% vs. 1%). In 15- to 19-year-old women, prevalence was 13% in non-Hispanic blacks, 11% in Mexican-Americans, and 5% in non-Hispanic whites.

Winter *et al.* (2000) undertook a cross sectional retrospective study of GUM clinic cases in Coventry, West Midlands, from 1992 to 1996. Subjects were assigned a Townsend deprivation score based on residence. The mean annual incidence of genital chlamydia was 151 episodes (95% CI 140-163) per 100,000 population in men and 138 episodes (95% CI 128-149) per 100,000 population in women. Highest subgroup incidence was observed in 15-19 year old black women (2367 (95% CI 1370-4560) per 100,000), and 20-24 year old black men (1951 (95% CI 1158-3220) per 100,000). In univariate analyses, the most important risk factor for chlamydia infection in males was being black (incidence 1377 (95% CI 1137-1652) per 100,000 for black v 133 (95% CI 122-145) per 100,000 for white; RR 10.4,  $p < 0.0001$ ) and for women was young age (incidence 475 (95% CI 415-540) per 100,000 for age group 15-19 years v 52 (95% CI 45-60) per 100,000 for age group 25-64 years; RR 9.1,  $p < 0.0001$ ). In Poisson regression models of first episodes of genital chlamydia, for both males and females the effect of ethnic group could not be fully explained by socioeconomic confounding. There were significant interactions between age and ethnic group for both sexes and between age and level of deprivation for men. Geographical analysis revealed a high incidence of genital chlamydia in estates on the edge of the city as well as the urban core.

To date, relatively few studies examining ethnic variations in chlamydia prevalence among men have been undertaken in the UK. (Evans, Bond, & MacRae 1999) in a cross sectional

GUM clinic study of Black heterosexual Caribbean and African men found chlamydial infection to be associated with Black Caribbean ethnicity. In multiple logistic regression, *Chlamydia trachomatis* infection was only associated with multiple sexual partners (Evans, Bond, & MacRae 1999).

### **Infectious syphilis**

Syphilis in the United States and many Western European countries is reached some of the lowest rates since recording began during the mid-1990s. In the US, syphilis remains focally distributed, with high incidence rates in the South and in metropolitan areas nationwide. In 1997, the incidence of P&S syphilis in the United States was 3.2 per 100,000 population (Centers for Disease Control and Prevention 1998). Rates of P&S syphilis were higher in the South (6.6 per 100,000 population) than in the Midwest (2.0), Northeast (1.1), and West (1.0). P&S syphilis rates for blacks remained substantially higher than those for non-Hispanic whites and Hispanics. In 1997, the P&S syphilis rate for blacks was 22.0 per 100,000, compared with 1.6 for Hispanics and 0.5 for non-Hispanic whites. The overall male-to-female P&S syphilis rate ratio was 1.2; this rate ratio was higher for Hispanics (2.1) than for blacks (1.3) and non-Hispanic whites (1.2). P&S syphilis rates were highest for Hispanic women aged 15-19 years (2.7), for black women aged 20-24 years (47.9), and for non-Hispanic white women aged 25-39 years (1.2). P&S syphilis rates were highest for Hispanic men aged 25-29 years (5.5) and for black and non-Hispanic white men aged 35-39 years (50.6 and 1.2, respectively). From 1990 to 1997, P&S syphilis rates declined 84% in the United States, in all regions and in all racial/ethnic groups; the largest decline occurred among Hispanics (90%) followed by blacks (85%) and non-Hispanic whites (81%). The P&S syphilis male-to-female rate ratio has remained stable for all races.

Racial/ ethnic disparities for infectious syphilis are similarly substantial. Primary and secondary syphilis occurs 45 times as often among non-Hispanic Blacks as among non-Hispanic whites, and 13 times as often among Hispanics as among non-Hispanic whites (Division of STD Prevention 1999; Kilmarx *et al.* 1997; Rolfs & Nakashima 1990).

Hyperendemic syphilis among poor rural and urban Black communities in the United States has been declared a national disaster, with significant investment in disease prevention efforts and funding (Division of STD Prevention 1999). Poverty, which is more common among Black than among the White ethnic majority, is closely associated with the prevalence of STIs, and may provide a link between membership in a minority population and an increased risk (either through its influence on behaviours or service access) (Wasserheit & Aral, 1996).

Kilmarx *et al.* (1997) in an ecological analysis, using the county as the unit of analysis, was performed to generate hypotheses about community-level determinants of syphilis rates. In the multivariate regression model, sociodemographic characteristics accounted for 71% of the variation in syphilis rates among counties. With other factors accounted for, the most highly correlated characteristics were percentage non-Hispanic Black population, county location in the South, percentage of the population that was urban, percentage Hispanic population, and percentage of births to women younger than 20 years. The authors concluded that most of the variation in syphilis rates among counties is accounted for by sociodemographic characteristics.

### **Other bacterial STDs**

Evans *et al* (1998) also used a prospective study of reported sexual behaviour in 1025 STD clinic attendees in London to determine independent risks with predictive value for specific sexually transmitted diseases in women. Independent risks for gonorrhoea were teenage (RR 2.0), black race (RR 2.0), more than two partners in the past year (RR 2.2) and previous pregnancy (RR 2.1). Trichomoniasis (RR 2.5), chlamydial infection (RR 1.8) and pelvic inflammatory disease (RR 4.8) also had significant predictive value. Conversely, gonorrhoea proved a risk for chlamydial infection (RR 2.1) together with age under 25 years (RR 2.3) and more than five partners in the previous year (RR 2.2). Ano-genital herpes was

predicted by a total of more than 10 sexual partners (RR 2.6) and by both anal (RR 2.2) and oral intercourse (RR 2.9). Age under 25 years was the only independent risk for ano-genital warts (RR 2.0). The risk for any genital infection was increased by more than one sexual partner in the preceding year (RR 1.7) and black race (RR 2.0). They concluded that STIs show both similarities and differences in the risk factors associated with their transmission. These risk profiles facilitate the targeting of health education measures for those sections of the community at greatest risk and form a baseline for the future assessment of the effects of condom protected sexual intercourse and other safer sexual practices.

Racial and ethnic variations in bacterial vaginosis (BV) are well documented and a multiplicity of factors including sexual activity, vaginal hygiene, smoking, and clothing have been implicated (Hart 1993; Paige *et al.* 1998; Rajamanoharan *et al.* 1999; Royce *et al.* 2000). Llahi-Camp *et al.* (1996) screened 500 consecutive patients attending a Recurrent Miscarriage Clinic and found that BV was found three times more commonly in Black-Caribbean women [17 (29%) of 58] than in Caucasian women [36 (9%) of 379]. The condition occurred twice as often among smokers than non-smokers and, in both groups, it was at least twice as common in women with a history of at least one late miscarriage as in those who had had early pregnancy losses only ( $P < 0.001$ ). The relationship between BV and smoking was independent of ethnic origin. Women who douched with chloroxylonol were mostly Black-Caribbean, and had BV more than twice as often as women who did not douche (Llahi-Camp *et al.* 1996).

**3.3.3 Evidence for ethnic variations in Trichomoniasis remains scant (Cotch *et al.* 1997; Franklin & Monif 2000; Sorvillo *et al.* 1998). Recent increases in syphilis incidence in the United Kingdom have been associated with travel to or sexual contact with individuals from the former Eastern European States or with outbreaks among homosexual men (Crook *et al.* 2002; Doherty *et al.* 2002; Johnson, Fenton, & Mercer 2002). As such, the UK syphilis epidemiology among heterosexuals reflects global trends and patterns of travel and migration (The UK**

**Collaborative Group for HIV and STI Surveillance 2004).**

### 3.3.3 Race, ethnicity and viral STIs

#### Genital herpes

The prevalence of infection with the genital herpes simplex virus type 2 (HSV-2) has been difficult to ascertain, primarily because of the large percentage of subclinical cases and the limitations in specificity of serologic assays for antibody to HSV-2. To obtain improved estimates of the distribution of HSV-2 infection in the general population, a number of studies have used HSV type-specific antibody assay to test serum samples clinic (Becker *et al.* 1996; Breinig *et al.* 1990; Short *et al.* 1984; Smith *et al.* 1999), community (Lewis *et al.* 1999) (Gibson *et al.* 1990; Siegel *et al.* 1992) and probability sample (Catania, Binson, & Stone 1996; Fleming *et al.* 1997; Johnson *et al.* 1989) surveys. Data from these studies provide some insight into ethnic variations in HSV prevalence. Many of these studies employed logistic regression techniques to explore the factors independently associated with anti-HSV-2 seropositivity. Many of the HSV studies controlled for high-risk sexual behaviour, and a few for socio-economic status.

Fleming *et al.* (1997) in a probability sample National Health and Nutrition Study (NHANES) study found HSV-2 seroprevalence to be higher among women and Blacks compared with men and White racial groups respectively. In multivariate analyses, female sex, Black race or Mexican American ethnicity, older age, less education, poverty, cocaine use and high reported lifetime partners were independently associated with prevalent infections. This finding has been subsequently confirmed in other studies (Catania, Binson, & Stone 1996; Johnson *et al.* 1989; Siegel *et al.* 1992). Catania, Binson, & Stone (1996) in a US population-based seroprevalence survey found disassortative sexual mixing to be significantly associated with HSV-2 seropositivity. The likelihood of mixing was associated with age, education, ethnicity and history of jail or substance abuse.

Siegel *et al.* (1992) examined the extent and correlates of infection with HSV-1 and HSV-2 in an inner-city community, using a cross-sectional, community-based, random household

survey of 1770 unmarried men and women aged 20 to 44 years from three San Francisco neighborhoods. Of blood samples from 1212 participants available for testing, 750 (62%) had HSV-1 antibodies and 400 (33%) had HSV-2 antibodies. After controlling for other variables, HSV-1 antibody was significantly correlated ( $p < 0.05$ ) with older age (in heterosexual men, women, and homosexually active men), less education (in heterosexual men and women), and Hispanic (especially those not born in the United States) or black race. HSV-2 antibody was significantly correlated ( $p < 0.05$ ) with female gender, number of lifetime sexual partners and older age (in heterosexual men and women), and low levels of education and black or Hispanic race (in women). Among those with antibody to HSV-2, only 28 (19%) of 149 men and 32 (13%) of 251 women reported a history of genital herpes. However, most men (62%) and women (84%) who reported a history of genital herpes had HSV-2 antibodies.

Gibson *et al.* (1990) undertook a cross-sectional multistage probability sample survey among university students. The prevalence of HSV-1 antibody was 37.2% in freshmen and 46.1% in fourth-year students; that for HSV-2 antibody was 0.4% and 4.3%, respectively. Multiple logistic regression analyses indicated that the significant predictors of HSV-1 antibodies in this population were female gender, black race, first intercourse at age less than or equal to 15 years, total years of sexual activity, history of a partner with oral sores, and a personal history of a non-HSV sexually transmitted disease (STD). Predictors of HSV-2 antibody were black race, duration of sexual activity, and history of a non-HSV STD.

Finally, Johnson *et al.* (1989) used an HSV type-specific antibody assay to test serum samples from 4201 participants in the second National Health and Nutrition Examination Survey. Between 1976 to 1980, 16.4 percent of the U.S. population 15 to 74 years of age (approximately 25 million persons) was infected with HSV-2 (95 percent confidence interval, 14.2 to 18.6 percent). Age and race were the demographic factors associated most strongly with the presence of HSV-2 antibody. The prevalence of the antibody increased



from less than 1 percent in the group under 15 years old to 20.2 percent in the group 30 to 44 years old; it increased only slightly thereafter. In the oldest group, 60 to 74 years of age, the prevalence was 19.7 percent in whites and 64.7 percent in blacks. Among blacks of all age groups, but not whites, higher rates were observed in women than in men. The associations were weaker with respect to marital status, income, education, urban residence, and region of the country. After control for age, sex, and race, only the association with marital status remained significant; the rate was increased in persons previously married--i.e., divorced, separated, or widowed.

### **Human papilloma virus infections**

Minority women in the United States experience a disproportionately high burden of the more than two million yearly cases of squamous intraepithelial lesions of the cervix. Oncogenic human papillomavirus (HPV) infections, the necessary cause of most cervical cancers, are common and usually clear within 1 to 2 years. Identifying cofactors that lead to cancer among HPV-infected women has depended mainly on case-control studies defining HPV by DNA testing. DNA testing assesses only current infection; thus, concerns about residual confounding remain. Risk factors for squamous intraepithelial lesions of the cervix are infection with sexually acquired HPV, an early age at first intercourse, history of multiple sexual partners, oral contraceptive use, high parity, lower socio-economic status, poor diet, immunosuppression, and promiscuous male sexual partners.

Few population based HPV prevalence studies have been undertaken, the majority within the US. Shields *et al* (2004) used seropositivity to HPV types 16, 18, 31, 45, and 52 as a marker of past exposure and compared 486 seropositive controls compared with 235 invasive cervical cancer cases. Independent, significant predictors of seropositivity among controls included numbers of sexual partners, Black race, and oral contraceptive use. Condom use was protective. Among HPV-exposed women, Papanicolaou screening, Black race, and yeast infection were significantly associated with reduced cancer risk. Current smoking was associated with a 2-fold increase in risk; there were independent, significant

trends of increased risk with numbers of cigarettes smoked (P for trend = 0.003) and years of smoking (P for trend = 0.01). Other significant predictors of increased risk included low education and income and history of non-specific genital infection.

Stone *et al.* (2002) investigated the seroepidemiology of HPV-16 infection in the United States by using a population-based survey using serum samples and questionnaire data from 1991 to 1994 for the National Health and Nutrition Examination Surveys. HPV-16-specific IgG antibody was detected by use of an HPV-16 virus-like particle ELISA. HPV-16 seropositivity in the US population aged 12-59 years was 13.0% (95% CI, 11.5%-14.7%). Seroprevalence was higher in women (17.9%) than in men (7.9%). Age, race/ethnicity, and number of lifetime sex partners were associated with HPV seropositivity in women. Race/ethnicity, age at first intercourse, urban/nonurban residence, years of sexual activity, and having had sex with a man were associated with HPV seropositivity in men.

### **3.4 RESULTS II. WHY MIGHT ETHNIC VARIATIONS EXIST?**

In this section, results from the literature review related to why and how ethnic variations in disease incidence may be occurring, are discussed.

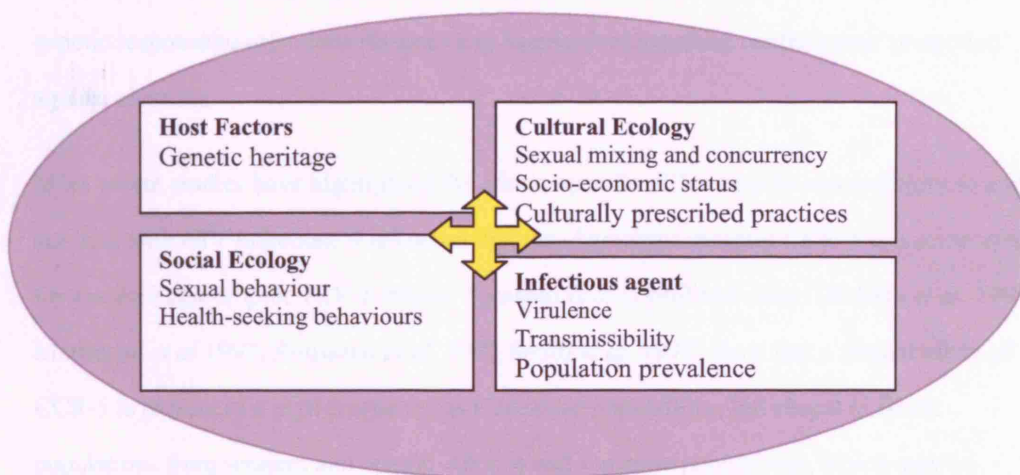
In an expansion of the 'host - infectious agent - environment' triad, Ward (2001) argues that the interrelationship between ethnicity and an infectious disease is in part confounded by the geographic constraints imposed on the infectious pathogens and their vectors.

Consequently, Ward proposes use of a more robust framework, the 'ethnic macro-social environment', for understanding the relationship between ethnicity and infectious disease.

In this model, the ethnic distinctiveness of any infectious disease is determined by an interplay between the cultural ecology (culturally prescribed practices e.g. food preferences, partnership choice); social ecology (high-risk behaviours which may increase the individual's risk of exposure or transmission of infection); and their genetic heritage.

For the majority of diseases, both the social and cultural ecologies interact to produce ethnic-specific distribution of environmental risk factors, which then interact with the genetic heritage and infectious agent to influence disease risk. I utilise Ward's conceptual framework to present the results of the literature review on the wider determinants of ethnic variations in sexual health outcomes.

**Figure 3. A conceptual framework for understanding ethnic variations in STI incidence. Adapted from Ward(2001)**



### 3.4.1 Host factors

#### Genetic heritage

Despite the fact that genetic susceptibility to disease risk has been documented for a variety of chronic diseases including diabetes, hypertension, cardiovascular disease, and haemoglobinopathies (Nazroo 1997; Benzeval, Judge & Smaje 1995; Modood *et al.* 1997; Chaturvedi, McKeigue & Marmot 1993; Sharp *et al.* 1995; Cronin *et al.* 1994), there has been a general reluctance to entertain the possibility of similar mechanisms operating for infectious disease, including STIs.

The potential contribution of genetic susceptibility to specific disease is contentious. At a global level, analysis of existing data suggests that between 70 and 85 percent of human genetic diversity is contained *within* ethnic groups rather than between them. Since populations vary genetically, any contribution that genetic factors make towards disease risk will result in population-specific differentiation of disease risk. This variation is seen with monogenetic disorders inherited as Mendelian traits e.g. cystic fibrosis, hemochromatosis and Tay-Sachs disease (Nazroo 1997). The genetic differentiation associated with the social identification of ethnic groups can lead to significant associations between ethnicity and genetic response to infectious disease (e.g. haemoglobinopathies confer some 'protection' against malaria).

More recent studies have highlighted the ethnic-specific differences in susceptibility to and survival with HIV infection. It is known that the chemokine receptor CCR-5 is a co-receptor for macrophagic-trophic HIV-1 strains. Samsom *et al.* (1996) and others (Balotta *et al.* 1997; Martinson *et al.* 1997; Rousseau *et al.* 1997; Smith *et al.* 1997) show that a mutant allele of CCR-5 is present in a high-frequency in Caucasian populations, but absent in Black populations from western and central African and Japanese populations, which may be associated with increased susceptibility to HIV infection. Other ethnically-associated genetic variations have been described for HLA-DQ antigens (Achord *et al.* 1996; Achord *et al.* 1997); and major histocompatibility complex class II DR alleles DRB1\*1501 and those encoding HLA-DR13 (Winchester *et al.* 1995) - all of which are associated with a reduced likelihood in maternally transmitted HIV-1 infection. These genetic variations suggest that susceptibility to HIV infection may well vary across ethnic groups.

Despite this evidence, few researchers have considered the potential impact of genetic susceptibility on the epidemiology of STIs. The extremely high rates of bacterial STIs (particularly gonorrhoea) among populations of African origin are consistent across western industrialised settings. Although no studies have been done on ethnic differences in carriage rates for *N. gonorrhoeae*, there is some evidence to suggest variations in carriage rates of *N.*

*meningitidis* among ethnic minorities (Fraser, Geil, & Feldman 1974; Noble, Cooper, & Miller 1979). Zhu and colleagues (Zhu *et al.* 2000) showed high prevalence of complement component C6 deficiency<sup>1</sup> among African Americans using polymerase chain reaction/single-strand conformation polymorphism analysis followed by DNA sequencing. They screened genomic DNA from 200 randomly chosen Blacks and an equal number from Whites for three loss-of-function C6 mutations. Ten Blacks and two Whites were found to be heterozygous for one of the mutations. Two of the mutations, 1195delC and 1936delG, were found exclusively in Black individuals. A third previously undescribed mutation, 878delA, was found at equal frequency among the two groups. The difference between the two groups was significant ( $p=0.027$ ), indicating that C6 deficiency due to these three mutations is more common among Blacks than Whites in the local area, Jefferson County, Alabama. In this same study, a subsequent review of the county health department records over the past six years revealed a higher incidence of meningococcal meningitis in Blacks due to serogroups Y and W-135 which paralleled the difference in the estimated prevalence of C6 deficiency. Among Black residents of the county ( $n = 235\ 598$ ) there were 15 cases of meningitis due to these two serogroups, compared with two cases in the white population ( $n = 422\ 604$ ) ( $P = 0.002$ ). The authors concluded that C6 deficiency is more common among Blacks than Whites in the southeastern United States, with a frequency approaching 1 in 1600 Black individuals.

Noble *et al.* (1979) also studied pharyngeal colonisation by *Neisseria gonorrhoeae* and *Neisseria meningitidis* in 2000 patients attending a venereal disease clinic. Of these patients, 64% were white and 36% were black. The incidence of genital or rectal infections or both was higher in the black patients. Pharyngeal colonisation by gonococci was present in 1.3% of the patients. There was no significant associations between pharyngeal colonisation and

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<sup>1</sup> Complement C6 is a part of the membrane attack complex that forms a pore-like structure in cell membranes following complement activation. Deficiency of terminal complement components predisposes individuals to infection with *Neisseriae sp.*

the pharyngeal symptoms, race, sex, or marital state of the patients. Pharyngeal colonisation was more frequent in patients with gonococcal infections at other sites. They also noted that meningococcal colonisation of the pharynx was significantly more frequent in the white patients and concluded that this could be a genetically determined phenomenon.

These observations confirm a potential role of genetic heritage on susceptibility to infectious disease, however more work is needed to assess the impact of genetic heritage on susceptibility to bacterial and viral STIs.

### **3.4.2 Social Ecology**

#### **Sexual behaviour**

High-risk sexual behaviour is a key determinant of STI acquisition risk at the individual level (Aral & Holmes 1991; Wasserheit & Aral 1996), and consequently the patterns and distribution of sexual risk behaviours in a population are likely to exert a strong influence on the overall patterns of STI incidence and prevalence (Johnson *et al.* 2001). Relatively few of the studies reviewed in the earlier part of this chapter highlighted significant differences in high-risk behaviour across ethnic groups which could account for the observed differences in disease outcomes. The best studies to examine such a relationship would be large-scale probability sample surveys of sexual behaviour, which collect 1) biological outcome measures in order to measure both reported and prevalent STI and 2) a variety of socio-demographic indicators to adjust for possible confounding. Unfortunately, no such studies had yet been undertaken in Britain.

In Britain, the 1990/91 National Survey of Sexual Attitudes and Lifestyles (Natsal 1990 (Johnson *et al.* 1994), among nearly 19,000 respondents aged between 16 and 59 was not powered to explore ethnic variations in sexual health outcomes and collected information using only broad racial categories. Nevertheless, analyses from this study suggested some general differences. For example, 'Asian' racial group was powerfully protective in terms of

early intercourse. Fewer Asian women (11%) reported sexual intercourse before the age of 16 years compared to 19% of White women and 26% of Black women. Despite later sexual activity and an increased tendency for sex to take place within marriage, Asian women were more likely to have had an abortion both at some point in their lives, and in the more recent time period of the last five years, than White women. Published data from the Natsal 19990 survey (Johnson *et al.* 1994) also indicated that Black men reported having twice the number of lifetime sexual partners than White men, but the number of observations was small, and no adjustment for confounding variables was undertaken (Johnson *et al.* 1994).

### **Sexual mixing patterns and networks**

Sexual mixing may be an important determinant of STD transmission dynamics at the population level and an important risk factor for infection at the individual level<sup>1</sup>(Aral & Holmes 1991; Wasserheit & Aral 1996). Sexual mixing within many ‘multicultural’ societies remains highly assortative (Barlow, Daker White, & Band 1997) (i.e. predominantly within rather than across ethnic groups), although acculturation may act to oppose this.

Aral *et al.* (1999) used mixing matrices, developed based on characteristics of the STD clinic attenders and their partners, and found that partnerships that were discordant in terms of race/ethnicity, age, education, and numbers of partners were associated with a significant increased risk of gonorrhoea and chlamydial infection. The study also highlighted the importance of STD prevalence in sub-populations as key determinants of STI incidence in the overall population (Aral *et al.* 1999). They concluded that social determinants of sexual health outcomes (e.g. race/ethnicity, gender, and age) were more important than behavioural determinants (e.g. sexual behaviour).

Further work by Stoner *et al.* (2000) underscored the importance of understanding sexual networks in disease prevention. They conducted face-to-face interviews with index patients with gonorrhoea and chlamydia and their named sex partners, as well as the partners of

infected partners. Gonococcal-network members differed significantly from chlamydial-network members in a number of demographic variables, including race/ethnicity, education, and unemployment status. Gonococcal-network members were more likely to report more sex partners, past history of crack-cocaine use, sexual assault, and having been in jail, than did chlamydial-network members.

Rothenberg's (2000) most recent investigation on networks and syphilis transmission suggests that among groups with high STI risk, partner concurrency is higher, even though number of partners over time may be similar. Similar findings from Laumann, Youm, & Aral (2000) using national survey data from the United States confirmed that STI risk was related to partner concurrency and inter-group mixing patterns. Using data from the National Health Social and Lifestyle Survey (NHSLs) to explore sexual mixing, they argued that African Americans' higher infection rate for bacterial diseases can be explained by the fact that: First, partner choice is more highly disassortative - meaning that 'peripheral' African Americans (who have had only one partner in the past year) are five times more likely to choose 'core' African Americans (who have had four or more partners in the past year) than 'peripheral' Whites are to choose 'core' Whites. Secondly, sexually transmitted infections are likely to remain clustered within African Americans because their partner choices are more segregated (assortative mixing) than other groups (Laumann, Tourn, Aral 2000). Understanding the role of sexual networks in the spread of bacterial STIs can help identify strategies for targeting interventions with ethnic minorities.

### **The socio-economic context**

Relatively little investigation into the role of socio-economic status and sexual health inequalities have been undertaken despite evidence to suggest its dominant effect on other health outcomes (Thomas 1999;PHLS 2000; Townsend & Davidson 1982; Davey Smith G 1990; Johnson 1988; Laumann *et al.* 1994; Acheson 1998; Nazroo 1997). A framework for understanding the mechanisms by which socio-economic status may influence health have been outlined by Nazroo (1997) and are summarised in Box 3 alongside suggestions for



their potential relevance to sexual health.

**Box 3. Understanding the mechanisms through which socio-economic status may influence sexual health**

Typology	Mechanisms	Relevance to sexual health
SOCIAL CLASS	Variations in class position of ethnic groups are manifest in differing social-economic disadvantage.	❖ Opportunities for sexual partnerships ❖ Sexual exploitation
DISCRIMINATION	Ethnic minority groups are discriminated against and recognise themselves as being disadvantaged (within the workplace and in exclusion from wider society).	❖ Quality of care received ❖ Access to GUM services ❖ Effectiveness and delivery of primary and secondary prevention interventions
GEOGRAPHIC CLUSTERING	Ethnic minorities are concentrated in particular geographic locations, which have special attributes that should allow the exploration of ecological contributions to inequalities in health.	❖ Poor access to inner city clinics ❖ Understating of services ❖ Assortative mixing worsens endemicity
MIGRANT NEEDS	Migrant ethnic minority people have been through a number of life-course transitions, some of which would be related to changes in material resources, others to changes in social networks and position in the social hierarchy.	❖ Poor GUM service access ❖ High background prevalence of HIV and other STIs ❖ Characteristics of migrants
CULTURALLY PRESCRIBED PRACTICES	The relationship between lifestyles and health remains to be explored, so too the contribution of the individual's ethnic/ cultural background on this relationship.	❖ Attitudes towards safer sex ❖ Discrimination and stigma for HIV and other STIs ❖ Patterns of sexual relationships
ROLE OF WOMEN	Gender differences in social position and expectation are present and in some cases wider than ethnic differences.	❖ Access to curative services ❖ Domestic violence as a result of diagnosis

Source: Adapted from (Nazroo 1997)

Very few probability sample studies of sexual behaviour have explored social class and economic status variations in sexual risk behaviour. Tanfer, Cubbins, & Billy (1995) in multivariate analyses from two nationally representative surveys of adult men and women in the United States showed that the likelihood of reported STDs was independently associated with gender, race and socio-economic status, even after controlling for differences in sexual and health behaviour. They found women and Black respondents to be more than three times as likely to report an STD infection as men and White respondents; men with less than 12 years of education were 30% less likely to report having a STD than those with more schooling. Income, welfare status and access to health-care had no significant association with self-reported STD incidence, unlike key sexual behaviour indicators including ever having heterosexual anal intercourse and increasing number of lifetime sexual partners

(Tanfer, Cubbins, & Billy 1995).

Ellen *et al.* (1995) examined the effect of socioeconomic position on the differences in the 3-year rates (1990 to 1992) of reported cases of gonorrhoea and chlamydia between Black and White adolescents, aged 12 to 20 years, residing in San Francisco. The crude relative risks for Blacks were 23.4 (95% confidence interval [CI] = 20.4, 27.8) for gonorrhoea and 9.3 (95% CI = 8.3, 10.3) for chlamydia. Adjusting for poverty and occupational status, the relative risks were 28.7 (95% CI = 22.5, 36.1) for gonorrhoea and 8.9 (95% CI = 7.4, 10.6) for chlamydia. The authors concluded that factors other than poverty and occupational status account for the racial/ethnic differences in the rates of gonorrhoea and chlamydia among adolescents in San Francisco.

In Britain, a few GUM clinic based studies (Low N *et al.* 1997; Lacey *et al.* 1997) using residential post-codes of attenders as a proxy for socio-economic status have been undertaken. Such analyses have been facilitated by the use of validated deprivation measures (e.g. Jarman, Carstairs) which provide useful proxy measures (especially when the full postal code is not available) for assigning a measure of socio-economic deprivation. These studies (Low, Daker-White, Barlow, & Pozniak 1997); (Lacey *et al.* 1997); (Ellen *et al.* 1995) have shown that ethnic disparities in STI rates remain even after adjusting for socio-economic status. This may in part be explained by the crude measures used to assign social class, and residual confounding due to sexual behaviour.

Fife and colleagues (Fife & Mode 1992) studied trends in AIDS incidence by the per capita income of the census tracts of residence of Philadelphia. AIDS incidence increased steadily in the lowest income tercile in contrast with levelling in the highest income tercile. This relationship persisted even after adjusting for race and behavioural risk category. Income was positively associated with the private medical insurance coverage and with median survival after AIDS diagnosis, suggesting a disproportionate distribution of the benefit of medical therapy. Few other studies combining AIDS surveillance data with census population and postal code economic indices (Zierler *et al.* 2000) have shown strong

correlation between AIDS incidence and economic deprivation, with gender and race being important influencing factors.

Qualitative research using a range of methodologies (in-depth interviews, participant observation, rapid assessments) have provided some insight into the mechanisms through which socio-economic deprivation may influence sexual health outcomes. Perhaps one of the best examples of this, is research aimed at understanding the social context of syphilis in southeast United States. Thomas & Thomas (1999) highlighted the impact of worsening poverty, income disparity, social capital and ratio of men to women which accompanied successive change in national economy and farming policies during the latter half of the 20<sup>th</sup> century. The progressive erosion of the Black economic base in these areas led to significant demographic shifts which facilitated STI transmission. When coupled with: poor provision of and access to sexual health services; poor race relations; stigma of STIs (Aral 1996; Thomas *et al.* 1999) such conditions create and facilitate vulnerable networks or conditions for STI transmission.

Socio-anthropologic investigation has also been used to examine how sexual health policy is developed and shaped in responding to ethnic inequalities. Dievler and Pappas (1999) studied how social class and race affects HIV/AIDS and tuberculosis policy-making in Washington DC. They found that the role of social class was often contextualised in terms of 'race' and 'place' and that social class considerations and racial politics shaped the policies that were developed and implemented. In concert, the limited evidence suggests that there is no clear relationship between social class, ethnicity and sexual health outcomes and that the influence and impact of social class are not limited to those at the lower end of the spectrum (Johnson, Wadsworth, Wellings, & Field 1994).

#### **Access to and utilisation of curative sexual health services**

Ensuring access to sexual health services are key strategies for reducing the burden of STIs (Adler, Foster, Richens, & Slavin 1996). However, even when quality diagnostic and

treatment services are accessible, target communities may still fail to use them. Access to health-care is often worse among the young, many of whom are at greatest risk of acquiring STIs. Rietmeijer *et al.* (Rietmeijer *et al.* 1998) in a community-based survey of Black and Hispanic youth in the United States found use of general health services to be far more prevalent than use of specialised sexual health services. The authors noted the importance of school and community clinics as sources of general health and STD care. They argued their findings underscored the need to extend STD prevention interventions to include service in general health settings; community interventions to promote and enhance access to health-care; and community-based screening programmes for those unwilling or unable to access clinic-based services (Rietmeijer *et al.* 1998).

Poor knowledge about available services may also limit their use. Valdiserri, Holtgrave, & Brackbill (1993) in a random digit dialling telephone survey of 18,557 adults in 45 states in the United States found that although 12% of respondents did not know where to access and HIV test, the majority (nearly two-thirds) identified medical doctors as their main source. People who were older, less educated, or on lower incomes were less likely to know how to access funding.

**Box 4. Factors influencing access to sexual health services**

Main category	Associated variables
Socio-demographic factors	<ul style="list-style-type: none"> <li>❖ Gender</li> <li>❖ Adolescent issues</li> <li>❖ Race ethnicity</li> <li>❖ Socio-economic status</li> </ul>
Attitudinal and behavioural variables	<ul style="list-style-type: none"> <li>❖ Perception of risk/ fear of learning positive serostatus</li> <li>❖ Homosexual identification and behaviour</li> <li>❖ Injecting drug use</li> </ul>
Systems related variables	<ul style="list-style-type: none"> <li>❖ STD/GUM clinic systems (i.e. the process one goes through to be screened and tested for an STI/HIV) and site (where test is being offered)</li> <li>❖ Policy level characteristics (anonymous versus named testing)</li> <li>❖ Clinical referral mechanisms</li> <li>❖ Contextual issues (e.g. role of VCT in national HIV prevention strategy)</li> </ul>
Social marketing of sexual health screening and treatment	<ul style="list-style-type: none"> <li>❖ STD diagnosis as a consumer product (e.g. same day testing, at home testing etc.)</li> <li>❖ Price (costs) of sexual health services</li> <li>❖ Active promotion of sexual health screening and diagnosis.</li> </ul>

Source: Adapted from Brown(1989) and Valdiserri, Holtgrave, & West (1999)

Erwin and Peters (1999) found that the social circumstances of HIV-positive Black Africans living in London, combined with differences in cultural beliefs and experience of health-care in the United Kingdom, gave rise to particular concerns about taking antiretroviral therapies. These included the fear of being experimented upon, lack of confidence in drugs tested only on Caucasians, distrust of the medical profession, and fears of discrimination. In common with all HIV-positive individuals, concerns around when to start treatment, fears of side effects and compliance were commonplace. The importance of 'trust' in accessing health-care services has been highlighted in other qualitative studies (Elam *et al.* 1999; Kahn *et al.* 2000). In general, removal of barriers to trust, including confidentiality concerns, insensitivity (cultural or racial) of health-care workers are areas for improving access.

Where communities are particularly hard to reach, or do not routinely access health-care services, community-based screening and treatment for STIs may be useful. Pack *et al.*

(Pack, DiClemente, Hook, & Oh 2000) assessed STD prevalence among a sample of incarcerated 14 to 18 years minority males in a southern United States city. The cross-sectional study involved screening for gonorrhoea and chlamydia using ligase chain reaction tests. They found high prevalence (18%) for gonorrhoea, chlamydia, or both, and approximately 84% were asymptomatic. The authors called for routine STD screening and STD-prevention programmes for adolescent males in detention facilities.

Although much work has been done on opportunistic STI screening of women in outreach settings, very little has been done for men (Fenton 2000). This represents a relatively unexploited area for intervention, and could have the additional benefit of increasing men's interest in their sexual health. The provision of outreach STD diagnosis and treatment services are particularly important intervention strategies in concentrated or hyperendemic situations (Wasserheit & Aral 1996).

### **3.4.3 Cultural ecology**

From a sociological perspective, our ethnic and cultural backgrounds may influence our sexual health in a number of ways: how we learn about sexual matters, our attitudes and practices related to sex, our choice of partners and whom we have sex with, how we relate to and accept sexual health promotion messages, and utilise sexual health services. In concert, these influences may act to place communities at increased risk of adverse sexual health outcomes such as infection or unplanned conception or in contrast, may be protective.

In all communities, cultural norms operate to proscribe certain attitudes and behaviours and to prescribe others. Generally, social mores correspond closely with cultural norms. Societies which condone, or have relaxed social attitudes towards, for example, early sexual experience, concurrent sexual relationships or contact with sex workers, are more likely to have higher prevalence of these behaviours (Cleland & Ferry 1995). Where certain behaviours are effectively censured, the impact on sexual health status may well be protective, an example being found in the observation of delayed coitarche and coitarhe

occurring within the context of marriage in Middle Eastern and Islamic countries (Aral & Holmes 1995).

However, cultural influences on sexual lifestyles and attitudes are not static. Complex patterns of sexual lifestyles occur, especially where communities are in transition or where there is age-related diversity within the group. Migration to reside in either a more sexually permissive, or sexually restrictive, society can have immediate and enduring effects on an individual's sexual lifestyle choices. Young people of ethnic minorities may more easily share the social norms of the community into which they are integrating (through social interaction in schools, communities), compared to their parents and other older members of the group.

As with other health-related conditions, the socio-economic disadvantage of many ethnic minority communities in Britain may act to place them at a disadvantage as far as sexual health is concerned. For health care providers in socially deprived or economically disadvantaged areas, investment in sexual health services and sexual health marketing must be considered against other priorities. At the individual level, immigration concerns, economic survival, child-rearing and social integration are often more pressing concerns than sexual well being for many migrants.

Religion, a facet of cultural identity and affiliation, may reinforce cultural influences on sexual behaviour. Among some communities, religious dictates may be used to strengthen cultural messages relating to behaviours and practices (Elam, Fenton, Johnson, Nazroo, & Ritchie 1999).

### **Racism and discrimination**

The role of racism as a key determinant of ethnic inequalities in general and sexual health outcomes in western industrialised settings should not be ignored or underestimated. Examples abound in the medical literature of such racist precepts in health-related research (Leslie 1990), institutionalised racism in health-care (Antoine, Pierre, & Page

1990;Hutchinson 1992) or in racist and unethical treatment of ethnic minorities in medical research. The ‘Tuskegee Syphilis Study’ is perhaps the best known of the latter.

Commenced in 1931 as a survey of the natural history of untreated tertiary syphilis in Black men, the trial continued until 1972, long after the availability of effective therapy. This study enrolled 399 men with syphilis and 201 uninfected men to serve as controls. All were at least 25 years old at enrolment. The men were told they were in a study, but never educated about the implications, nor were they informed that there was a treatment for effective treatment for their disease - a treatment that was being withheld from them.

Brawley (1998) argues that a number of the factors that led to this failure of ethics still exist today. They include paternalism, arrogance, blind loyalty and misuse of science. The resultant mistrust of medical research among African Americans (and indeed Black communities in other industrialised settings) is significant (Brawley 1998;Dula 1994;Herek & Capitanio 1994). Thus unsurprisingly, perception of HIV/AIDS as a ‘government conspiracy’ (Klonoff & Landrine 1999) or White supremacist ploy (Herek & Capitanio 1994), or a strategy to ‘rid the world of the African’ (Guinan 1993;Thomas & Quinn 1991) remain today.

## **3.5 DISCUSSION**

### **3.5.1 Summary of key findings**

This chapter summarised the research literature relevant to racial and ethnic variations in STI incidence and prevalence. The reviewed studies present a mixed bag of hypotheses and methodologies related to the relationship between race, ethnicity, and the epidemiology of STIs.

Many of Littlewood’s (Littlewood & Lipsedge 1997) criticisms of ‘ethnicity and mental health’ research are applicable to the ‘ethnicity and sexual health’ field. In general, the reviewed studies: i) were predominantly from the United States; ii) focused more on



descriptive rather than explanatory investigations; iii) were predominantly bio-medical and quantitative; iv) were disproportionately focused on Black, as opposed to other ethnic groups, and; v) focused on poorer outcomes, rather than protective outcomes. The United Kingdom's contribution to understanding ethnic variations in STI epidemiology is scant, and largely stuck in the descriptive phase.

Other observations, arising from this literature review, relevant to understanding ethnic variations in the epidemiology of STIs include:

- 1) The overwhelming majority of studies have been undertaken in STD/GUM clinics, or with data derived from these sources. Many of these studies were inherently weak in proving associations between ethnicity and STI epidemiology given: a) the close association between STD/GUM clinic attendance, high-risk sexual behaviours and poverty and deprivation (especially in the United States); b) that STD/GUM clinic attendance is dependent upon the individual's health-seeking behaviours, which may be culturally determined; and c) that few STD/GUM clinic based attempted to adjust for potential confounders.
- 2) Great variations exist in the definition and use of race and ethnicity in studies of STI epidemiology. In general, most studies choose race as the variable of choice, however this varies by country, and investigator.
- 3) With the exception of syphilis, relatively few qualitative or ethnographic studies of STI incidence or service utilisation were found. There is a need to understand the social and cultural contexts influencing health-seeking behaviours, and attitudes towards STI acquisition, perception of services, and barriers to accessing care. This remains an area for future prioritisation.
- 4) Few studies were designed to *a priori* quantify and explain ethnic differences in STI incidence or prevalence. None gave sample size estimates or *a priori* consideration to the nature or magnitude of the anticipated differences being measured.

### **3.5.2 Limitations of this review**

This literature review has a number of limitations.

By selecting only comparative studies between racial/ethnic groups, it may be argued that a racist research paradigm is maintained in which comparison with the racial/ethnic majority is seen as the norm (rather than the group(s) at greatest or least risk). Studies undertaken solely within an ethnic group might have provided additional and interesting insights into disease risk factors, which were missed in selected comparative studies.

The review described outcomes and associations as given by the authors and did not attempt to standardise or harmonise definitions or diagnostic procedures.

Finally, other sexual health outcomes (e.g. related to quality of relationships, sexual enjoyment) were not covered, and therefore the review adopted a largely bio-medical approach to this issue. However, such a focus was required for the purposes of this thesis.

Few of the reviewed studies met any of the criteria outlined by Bhopal (2002) regarding the use of race/ethnicity as variables in health research. This is, in part, explained by the fact that only a handful were designed to specifically explore ethnic variations as primary research outcomes.

More commonly, racial/ethnic variations were explored in secondary analyses on datasets. Studies were therefore not sufficiently powered to identify racial/ethnic variations; racial/ethnicity categories were not properly derived or explained; *post hoc* adjustment for obvious and significant confounding factors were not undertaken; and few provided any critical insight into the limitations of using or presenting race/ethnicity based data. These criticisms are particularly applicable to STD/GUM clinic-based studies, where the available data, although excellent for outcome variables (e.g. diagnosed STIs), are severely restricted in the range of explanatory variables that are routinely collected.

### **3.5.3 Future research priorities**

The literature review highlighted the relative dearth of probability sample population based studies developed to explore the relationship between ethnicity and adverse sexual health outcomes (which, if properly designed, can provide the most robust evidence for ethnic variations); and qualitative studies which attempt to explore the explanations and contexts in which these variations occur.

**At the time of initiating this thesis, changing STI epidemiology, growing community advocacy, and renewed policy interest in improving sexual health stimulated the need to advance this research agenda through the development and implementation of the series of studies presented in this thesis (Chapters 4-8).**

## **Section 2**

# **Investigations**

## Chapter 4.

# A cross-sectional survey of GUM clinic attenders.

### CHAPTER SUMMARY

**Background:** Few GUM clinic-based studies in the UK have been undertaken to explore variations in the distribution of diagnosed STIs across ethnic groups. None have provided information on STI outcomes among Asian ethnic groups.

**Objectives:** To explore patterns of attendance by ethnicity; to determine whether ethnicity was independently associated with the diagnosis of an acute STI among an ethnically diverse group of first-time GUM clinic attenders.

**Setting:** Two inner London GUM clinics: The Mortimer Market and Archway Sexual Health Centres.

**Methods:** A retrospective study. A randomly selected group of ethnically diverse, first-time heterosexual GUM clinic attenders were studied in order to determine their demographic characteristics; the distribution of diagnosed STIs; and the factors associated with being diagnosed with an STI.

**Results:** Records of 1792 patients were examined. Differences in marital status, prior STI diagnosis and reported condom use at last intercourse were observed across ethnic groups. Black Caribbean male and female first-time attenders were most likely to report a previous STI whereas Indian sub-continent men and women were less likely to do so. Reported condom use at last intercourse was lowest among Black Caribbeans compared with other groups. Univariate analyses showed significant associations between ethnicity, partnership status, age, and condom use at last intercourse with being diagnosed with an acute STI. After controlling for significant demographic variables, diagnosis with an acute STI was found to be independently associated with Black Caribbean ethnicity (adjusted odds ratio 1.92, 95% confidence interval 1.24 to 2.95) and non-condom use at last intercourse (adj. OR 2.76, 95%CI 1.79 to 4.25) among men. Adjusting for condom use at last intercourse removed the association with ethnicity among men.

**Conclusions:** The study confirms the existence of ethnic group variations in diagnosed STIs, even among first-time GUM clinic attenders. Caution should be taken in interpreting GUM clinic-based studies due to considerable selection bias.

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**Candidate's contribution to this work:** This was the first investigation undertaken as part of the thesis. Study investigators included: Dr Angela Obasi, Dr Kevin Fenton and Prof. Anne Johnson. I led the design and development of the study protocol; data extraction from clinic notes; and supervision of research nurse (who extracted notes). The author undertook all analyses presented in this chapter.

## **4.1 BACKGROUND**

Chapter 3 identified and summarised findings from a number of STD/GUM clinic-based studies examining the distribution of diagnosed STIs across racial groups in Britain. At the time of undertaking this study, many of these studies were undertaken in deprived inner-city settings and used broad racial categories (e.g. Asian, Black, White) as a proxy for the ethnic origin of their attendees. Few studies employed logistic regression models to control for the impact of socio-economic status or sexual behaviour, or to explore those factors which were independently associated with the outcomes of interest. Many studies also failed to acknowledge the highly biased nature of GUM clinic-based studies, (Johnson *et al.* 1996) and consequently erroneously extrapolated their findings to be representative of the wider ethnic minority community.

### **4.1.1 Objectives**

This exploratory study was the first investigation undertaken as part of this thesis. The study's main objectives were to explore:

- 1) the demographic and behavioural characteristics of an ethnically diverse group of first-time GUM clinic attenders;
- 2) variations in STI diagnoses across GUM attenders of differing ethnic backgrounds;
- 3) the factors independently associated with being diagnosed with an acute STI among first-time GUM clinic attenders.

The intention was to build upon preceding GUM clinic studies, by collecting information on patients' self-defined ethnicity, rather than race, alongside a wider range of behavioural variables to explore ethnic variations in diagnostic outcomes.

This chapter is presented to illustrate the utility and limitations of GUM clinic-based studies in exploring ethnic variations in diagnosed STIs. Specific objectives are to 1) describe the methodology for the GUM clinic-based study; 2) to present findings related to demographic

characteristics, high-risk sexual behaviour and partnership status among new GUM attenders; and 3) to determine the factors associated with STI diagnosis among this high-risk population subgroup.

## **4.2 METHODS**

This study was undertaken in two large GUM clinics in central London (the Mortimer Market Centre, MMC, and the Archway Sexual Health Centre, ASHC), which together see over 10,000 new patients each year, 15-20% of whom belong to an ethnic minority.

Both GUM clinics serve an ethnically diverse population, characteristic of the local boroughs (Camden and Islington) (see Box 5 below). Camden and Islington have substantially higher proportions of resident ethnic minorities than the national average (18.3% versus 5.4%) as well as significantly higher proportions of Africans (23% v. 7.2%), Bangladeshis (14.0% v. 5.5%) and Other ethnic groups (13.3% v. 1.0%). Proportionately fewer Indian communities are resident in the borough compared with the national average (8.7% v. 28.3%).

Both clinics are part of large teaching hospitals and have been actively involved in developing and implementing academic, clinical and sexual health promotion interventions targeting local Black and ethnic minority communities (Camden and Islington Health Authority 1997a; Camden and Islington Health Authority 1997b). The two clinics were part of the then Camden and Islington Community Health Services NHS Trust and had shared protocols for patient management and care.

All new patients are required to complete a detailed registration form at their first visit. Demographic details (date of birth, gender, address, marital status, occupation, source of referral, date of presentation, and ethnicity) and reasons for attending the clinic are routinely collected at this time. In keeping with the Department of Health recommendations on collecting ethnicity information on clinic attenders, patients are also asked to define their ethnicity using one of eleven standard categories: White, Mixed, Other, Black African,

Black Caribbean, Black Other, Bangladeshi, Indian, Pakistani, Asian Other, Chinese.

Country of birth is not routinely recorded on attenders.

**Box 5. Population of Camden and Islington compared with England and Wales (1991 census)**

Census ethnicity category	Camden & Islington			England & Wales		
	Number	(%)	% ethnic	Number	(%)	% ethnic
White	253,665	81.6	-	511,873,794	94.5	
Black Caribbean	11,467	3.4	18.6	499,964	0.9	16.9
Black African	14,131	3.2	23.0	212,362	0.4	7.2
Black Other	4,833	1.4	7.9	178,401	0.3	6.0
Indian	5,368	1.6	8.7	840,255	1.5	28.3
Pakistani	1,341	0.4	2.2	476,555	0.9	16.1
Bangladeshi	8,621	2.6	14.0	162,835	0.3	5.5
Chinese	4,698	1.4	7.6	156,938	0.3	5.3
Asian Other	6,226	1.9	10.1	197,534	0.4	6.7
Other	8,180	2.5	13.3	29,206	0.5	1.0
Total ethnic minority population	61,503	18.3	100	2,963,998	5.4	100
<b>Total population</b>	<b>335,130</b>	<b>-</b>		<b>54,888,844</b>	<b>-</b>	

First-time clinic attenders are subsequently interviewed by an attending physician using a standardised proforma which enables the systematic collection of data on the patient's presenting complaint, relationship status, last and previous sexual contacts, prior STD/HIV testing and medical history. Additional information on cervical smear, contraceptive and pregnancy history is also obtained from new female patients.

All attending physicians are required to clearly record the outcomes of each clinical episode at the end of their clinical notes. In addition, they are required to document the appropriate diagnostic code(s) (used for the KC60 statistical returns from GUM clinics) for each clinical episode. Results of laboratory investigations performed during the clinical episode are returned and filed with patients' case notes.

Both clinics conform to standard agreed procedures for the collection and transport of patient specimens. Microbiological testing is undertaken at the Department of Microbiology University College Hospitals NHS Trust for Mortimer Market specimens and at the



Whittington Hospital for ASHC specimens using agreed standard operating protocols (SOPs).

#### **4.2.1 Study design**

This retrospective case note review of first-time GUM clinic attenders was undertaken in 1996. A sequential registration listing of all new patients (n=3,229) to both clinics during the 6-month period 1 April to 30<sup>th</sup> September 1995 was used as a sampling frame. The list contained the patient's clinic registration number, gender, ethnicity and date of clinic attendance.

From each clinic listing, 500 ethnic minority (non-white) attenders were systematically selected (1:3) from a random starting point. A corresponding number of White patients (one per minority patient) was then selected from the list for comparison. For each selected ethnic minority clinic attender, we chose the next White patient that registered at that clinic, on that day for inclusion, matched on gender and date of visit. This produced a list of 500 ethnic minority and White 'pairs' whose clinical notes were then retrieved and reviewed.

Patients (and their matched 'pair') were excluded if they had empty case notes, attended specialty clinics (e.g. HIV, contraception, hepatitis clinics), or had been previously registered at the clinic.

#### **4.2.2 Data collection**

A data collection proforma was designed to collect information on partnership details, STI and HIV testing history, sexual behaviour and diagnostic outcomes using a pre-coded questionnaire (Box 6 overleaf and Appendix 3). The proforma was used to collect routinely documented information from the patient's first visit. Three investigators extracted the study data. In order to ensure consistency and comparability of data extraction, a random selection of case notes (n=50 per investigator) were extracted and entered by the other two investigators and the results visually compared. This informal evaluation indicated a high degree of concordance between investigators and justified the continued use of the data extraction methods.

All diagnoses documented within case notes were confirmed by viewing lab results or by checking the documented coded KC60 diagnoses. Patients were classified as having an acute STI if they were diagnosed with any of the following conditions: gonorrhoea, genital chlamydial infection, genital warts, non-specific urethritis (NSU), bacterial vaginosis (BV), *Trichomonas vaginalis* (TV), genital herpes (HSV), syphilis, chancroid, donovanosis, lymphogranuloma venerum (LGV), pelvic inflammatory disease (PID).

Although associated with poor reproductive and gynaecologic outcomes, bacterial vaginosis is not classified as an acute STI and was therefore excluded from the main multivariate model exploring the factors independently associated with an STI diagnosis. However a sensitivity analysis, including BV as an STI was also undertaken to explore its impact on the multivariate model.

**Box 6.**  
**Data collection proforma used in the GUM clinic study**

Patient number:	1				Study number	2									
Date of presentation:	3			Date of Birth:	4										
Source :	GP <sub>1</sub>	Self <sub>2</sub>	Hosp <sub>3</sub>	Other <sub>4</sub>	N/A <sub>99</sub>	5	Sex:	male <sub>1</sub>	female <sub>2</sub>	6					
Sexuality:	Hetero <sub>1</sub>				Bisexual <sub>2</sub> Gay <sub>3</sub> Lesbian <sub>4</sub>				N/A <sub>99</sub>	7					
Ethnic Categories	White <sub>1</sub>		Black African <sub>4</sub>		Bangladeshi <sub>7</sub>		Asian (other) <sub>10</sub>			8					
	Mixed <sub>2</sub>		Black Caribbean <sub>5</sub>		Pakistani <sub>8</sub>		Chinese <sub>11</sub>								
	Other <sub>3</sub>		Black (other) <sub>6</sub>		Indian <sub>9</sub>										
Post Code:	N <sub>1</sub>	NW <sub>2</sub>	SW <sub>3</sub>	SE <sub>4</sub>	E <sub>5</sub>	EC <sub>6</sub>	W <sub>7</sub>	WC <sub>8</sub>	Other <sub>9</sub>	N/A <sub>99</sub>	9				
	Where?										10				
Marital Status:	Married <sub>1</sub>		Single <sub>2</sub>		Divorced <sub>3</sub>		Cohabiting <sub>4</sub>		N/A <sub>99</sub>		11				
Presenting Complaint	Symptoms <sub>1</sub>		Screen (no HIV test) <sub>2</sub>		Screen (+HIV test) <sub>3</sub>		HIV Test only <sub>4</sub>		Contact <sub>5</sub>		12				
	Other <sub>6</sub>		N/A <sub>99</sub>												
Current Relationships	Regular Partner		YES <sub>1</sub>		NO <sub>2</sub>		N/A <sub>99</sub>				13				
	Length of relationship		<1 mth <sub>1</sub>		1-6 mths <sub>2</sub>		>6 mths-1yr <sub>3</sub>		>1 year <sub>4</sub>		N/A <sub>99</sub>	14			
Last Sexual Contact:	Date (weeks since)		15		Contact abroad?		YES <sub>1</sub>		NO <sub>2</sub>		N/A <sub>99</sub>	16			
	LSC Partner		RegM <sub>1</sub>		RegF <sub>2</sub>		KnM <sub>3</sub>		KnF <sub>4</sub>		CasM <sub>5</sub>	CasF <sub>6</sub>	N/A <sub>99</sub>	17	
	Condoms used		YES <sub>1</sub>		NO <sub>2</sub>		N/A <sub>99</sub>						18		
Previous Sexual Contact:	Date (weeks since)		N/A <sub>99</sub>										19		
	LSC Partner		RegM <sub>1</sub>		RegF <sub>2</sub>		KnM <sub>3</sub>		KnF <sub>4</sub>		CasM <sub>5</sub>	CasF <sub>6</sub>	N/A <sub>99</sub>	20	
	Condoms used		YES <sub>1</sub>		NO <sub>2</sub>		N/A <sub>99</sub>						21		
Prior STDs:	YES <sub>1</sub>		NO <sub>2</sub>		N/A <sub>99</sub>								22		
Type of Infections	GC <sub>1</sub>		NSU <sub>2</sub>		Syphilis <sub>3</sub>		Chlamydia <sub>4</sub>						23		
	HSV <sub>5</sub>		HPV <sub>6</sub>		Tropical STD <sub>7</sub>		Other <sub>8</sub>		N/A <sub>99</sub>				24		
Prior HIV Test	YES <sub>1</sub>		NO <sub>2</sub>		26		When?		<1 year <sub>1</sub>		1-3 years <sub>2</sub>	>3 years <sub>3</sub>	27		
	N/A <sub>99</sub>												28		
	Last Test Result?		Positive <sub>1</sub>		Negative <sub>2</sub>		nknown <sub>99</sub>								
Diagnoses:											29				
											30				
											31				
											32				
Last Cervical Smear:	<1 year <sub>1</sub>		1-3 years <sub>2</sub>		>3 years <sub>3</sub>		N/A <sub>99</sub>						33		
Contraception:	YES <sub>1</sub>		NO <sub>2</sub>		N/A <sub>99</sub>		34		Type?		OCP <sub>1</sub>	IUD <sub>2</sub>	condoms <sub>3</sub>	other <sub>4</sub>	35
Pregnancies:	No. of Previous Pregnancies		36		No. of Previous miscarriages		38								
	No. of prior terminations		37												

PLACE PATIENT  
STICKER HERE

Where information is **NOT AVAILABLE** always code as '99'.

Where information is **NOT APPLICABLE** code as '88'

### **4.2.3 Data analysis**

Data were independently double entered and validated. Since ethnic minority patients were randomly selected, the distribution of the 11 ethnic minority groups in the sample reflected current patterns of service utilisation. As such, relatively larger proportions of Black ethnic groups were included in the study compared with others.

In order to avoid excluding smaller ethnic groups and to provide meaningful numbers to enable sub-group and multiple logistic regression analyses, summary ethnic categories were created. For the purposes of analysis, the 11 ethnic categories were collapsed into seven main groups: White, Mixed/Other, Black African, Black Caribbean, Black Other (mainly British born), Indian subcontinent (Bangladeshi, Indian, Pakistani,) and Asian Other (Asian Other, Chinese).

For the purposes of this report, analyses were restricted to heterosexual clinic attenders. Baseline demographic data were expressed as proportions of patients, or medians and ranges. Proportions across all seven ethnic groups were initially compared using the Chi-squared test for heterogeneity, and where significant, followed by comparing each minority group with White groups. The values of continuous variables in the two groups were compared with the t-test or Mann Whitney tests where appropriate. Odds ratios and 95% confidence intervals were calculated for all outcome measures for ethnic minority clients compared with White controls.

All variables found significant in uni-variate analysis were entered into forwards stepwise model selection (multiple logistic regression) to assess the factors associated with receiving a STI diagnosis on first clinic visit. Statistical analysis was performed using STATA for windows, release 5.0 (Stata Corporation 1997).

### **4.2.4 Ethics**

The clinical directors of both clinics approved the study. As the study involved the retrospective collection of anonymised patient data by clinic staff (all investigators held honorary or substantive contracts with the Trust) obtaining formal approval from the Local Research Ethics Committee was considered unnecessary at the time.

## **4.3 RESULTS**

### **4.3.1 Overall sample characteristics**

After excluding homosexual and bisexual patients, data were collected on 1792 eligible heterosexual patients (864 from Archway and 928 from Mortimer Market).

Table 4-1 (page 97) shows the distribution of ethnic minorities in the study population, by clinic, compared with the distribution in the surrounding borough. The data show an overrepresentation of Black Caribbean attendees and under representation of Indian subcontinent attendees in the study sample.

Table 4-2 (page 98) summarises the overall sample composition by gender and clinic of attendance. In general, the quality of data obtained from both centres was broadly comparable, however at ASHC, both marital status and condom use at last intercourse were poorly documented (reported on 23% (195/864) and 54% (466/864) eligible patients respectively). Among first-time clinic attenders, significant differences between the two clinic populations were observed in the ethnicity, marital status and prior HIV testing history of first-time male and female attenders (Table 4-2, page 97).

#### **Age and ethnicity**

Female attenders at MMC and ASHC were younger in comparison to male attenders (mean age 28.2 and 29.7 years compared with 31.2 and 32.3 years, respectively) (Table 4-2, page 97). Black Caribbean and Black Africans were the largest ethnic minority groups attending both clinics, followed by Black Others and those from the Indian subcontinent. Significant differences were noted in the ethnic distribution of female and male attenders at the two clinics. Among women, ASHC had proportionately more Black Caribbean (19% v. 8%) and fewer Asian Other groups (4% v. 10%) than Mortimer Market (Chi-squared=34.3 P<0.001). Among men, similar ethnic distribution patterns were observed (Chi-squared =39.1 P<0.001).

#### **Marital and relationship status**

Overall, 76% of clinic attenders described themselves as being single or divorced, and 28% married or cohabiting. More than 80% of women and men described themselves as currently being in a sexual relationship. ASHC saw proportionately more married and fewer divorced women and men than MMC (Table 4-2, page 97), although, as stated previously, at ASHC documentation of this variable was poor. Significant differences in the marital status of female attenders was observed across ethnic groups (Chi-squared =34.4,  $p=0.01$ ) (Table 4-3, page 99). Marital status also differed significantly across ethnic groups among male attenders (Chi-squared=29.9,  $p=0.04$ ) with higher proportions of Indian subcontinent and Other Asian men being married, and fewer being single or cohabiting than other groups (Table 4-4, page 99). No significant differences across ethnic groups were observed in the proportion of women or men reporting being currently in a relationship.

#### **Reasons for attending**

Concerns regarding the presence of STI-related symptoms were the most common reason given for attending by both women (56%) and men (65%), with no significant differences being observed between the two clinics. One in three women and one in five men attended for asymptomatic screening and 10% of attenders attended as a result of contact tracing (Table 4-2, page 97). No significant differences in the distribution of reasons for attending were observed across the ethnic groups.

### **4.3.2 STI and HIV testing histories**

#### **Prior history of an STI diagnosis**

At the time of their first attendance to MMC and ASHC clinics, 20% of women and 30% of men had previously been diagnosed with an STI. Significant differences were noted across ethnic groups by gender (Table 4-3 and Table 4-4, page 99). Nearly a quarter of White and Black Caribbean women reported having a previous STI, twice that of most other ethnic groups (Chi-squared=13.0,  $p=0.04$ ) (Table 4-3). Over a third of Black African (35%), Black Caribbean (35%) and Black Other (48%) men had a prior STI, compared with 8% of Indian subcontinent men (Chi-squared=18.4,  $p=0.005$ ) (Table 4-4).

#### **HIV testing history**

Overall, 11% of female and 9% of male first-time attenders had previously had an HIV test (Table 4-2, page 97). First-time attenders at ASH were significantly less likely to report having had a prior HIV test compared with those attending MMC (for women 8% v. 13%, Chi-squared=47.3  $P<0.001$ ; for men 4% v. 13%, Chi-squared=73.0  $P<0.001$ ). In general, there were no significant differences across the ethnic groups in the proportion reporting having had a prior HIV test, for both men and women.

### **4.3.3 Ethnic differences in reported sexual behaviour**

Information on an individual's last sexual contact (with a casual, known, regular partner) and condom use at last penetrative sexual intercourse were collected. 38% of women and 35% of men reported using a condom at last sexual intercourse. Among sexually active women, no significant differences across ethnic groups were observed in the type/nature of the last sexual partner (Chi-squared 33.1,  $p=0.101$ ), or the proportion using condoms at last sexual intercourse (if penetrative) (Chi-squared = 6.9442,  $p= 0.32$ ).

Similar findings were obtained for sexually active heterosexual men with the exception of condom use as last intercourse (if penetrative). Fewer (18%) Black Caribbean men reported using a condom at last penetrative sexual intercourse compared with other ethnic groups (over 30% of men in each other ethnic group) (Table 4-4, page 99).

### **4.3.4 Factors associated with the diagnosis of an acute STI**

Overall 20% (184/841) of women and 43% (270/673) of men were diagnosed with an acute STI at the end of their first GUM clinic visit. Univariate analyses were undertaken to determine the factors significantly associated with being diagnosed with an STI (Table 4-5, page 100).

Among women, the likelihood of being diagnosed with any STI (excluding BV) did not vary significantly across ethnic groups. Those who attended the MMC were significantly less likely to be diagnosed with an STI compared with women attending ASHC (Odds ratio 0.53, 95% confidence interval 0.38-0.74) (Table 4-5, page 100). Those who attending for screening were less likely to be diagnosed with an STI (OR 0.35, 95%CI 0.22-0.54)

compared with those who were symptomatic.

However among men, ethnic groups differed significantly with the likelihood of being diagnosed with an acute STI (Chi-squared= 22.9,  $p = 0.01$ ). Nearly one in two Black Caribbean, Black African and Black Other men were diagnosed with an STI, in contrast with those of Indian subcontinent (21%) and Asian Other (21%) ethnicity. Also among men, the likelihood of being diagnosed with an STI was lower among those attending for screening (OR 0.27, 95%CI 0.17 to 0.41) relative to those attending with symptoms. The risk was increased among those not using condoms at last intercourse (OR 2.76, 95%CI 1.79 to 4.25) relative to those that did.

Three logistic regression models were then created to assess the simultaneous effects of the significant demographic and behavioural factors on the likelihood of being diagnosed with an STI: a) for men, excluding condom use at last intercourse; b) for men, including condom use at last intercourse; c) for women including BV as an STI. The prevalence, odds ratios and adjusted OR of STI outcomes by gender are presented in (Table 4-5, page 100) (Models a, b) and (Table 4-6, page 101) (Model c).

Among men, after controlling for ethnicity, current partnership status, age and clinic of attendance, Black Caribbean ethnicity remained independently associated with the likelihood of being diagnosed with an STI (Adjusted OR 2.04, 1.28 to 3.24), (Table 4-5, page 100). When condom use at last intercourse was included in the model, it remained the only significant factor (adj. OR 2.66, 1.69 to 4.19), as the association with Black Caribbean ethnicity disappeared (adj. OR 1.37, 0.78 to 2.42). When interaction between condom use and ethnicity was included, none were significant.

#### **4.3.5 The impact of including bacterial vaginosis as an STI**

A sensitivity analysis was performed to determine the impact of including BV as an STI on the relationship between ethnicity and acute STI diagnoses. Given the strong association between BV and Black Caribbean ethnicity, it was unsurprising that its inclusion as an STI resulted in the emergence of significant heterogeneity across ethnic groups in the proportion diagnosed with any acute STI (Chi-squared = 16.6,  $p=0.015$ ). Including BV as an STI



resulted in over 40% of Black Caribbean and Black Other women being classified as having an acute STI – substantially higher than all other ethnic groups.

When BV was included as an STI (see Table 4-6, page 101), the likelihood of being diagnosed with an STI was significantly associated with MMC attendance (OR 0.58, 95%CI 0.44-0.77), Black Caribbean (OR 1.76, 95%CI 1.18 to 2.6) and Black Other (OR 2.32, 95%CI 1.31-4.1) ethnicities, and use of IUD as main contraceptive method (OR 2.98, 95%CI 1.32 to 6.74). In the corresponding multivariate model, controlling for the significant univariate variables removed the association with ethnicity and IUD use. Only clinic of attendance remained a significant association (adjusted OR 0.54, 95%CI 0.35 to 0.85).

#### **4.3.6 Ethnic variations in diagnostic outcomes**

Differences in the diagnosis of specific STIs across ethnic groups were also explored. Among heterosexual women, statistically significant differences in the prevalence of diagnosed STIs across ethnic groups were observed for gonorrhoea, TV, BV and genital warts (Table 4-7, page 102).

In general, Indian subcontinent and Asian Other women were consistently less likely to be diagnosed with any of these conditions than other ethnic groups. Gonorrhoea showed the most marked ethnic clustering with 4% of Black Caribbean women being diagnosed compared with 0% in all other ethnic groups (Chi-squared = 19.9,  $p = 0.003$ ). Higher proportions of Black Caribbean (7%) and Black African women (6%) were also diagnosed with *Trichomonas vaginalis* (TV) (Chi-squared = 13.3,  $p = 0.04$ ) than other ethnic groups. BV was also more prevalent among the Black ethnic groups with 28% of Black Other and 20% of Black Caribbean women being diagnosed. As with heterosexual men, the prevalence of diagnosed genital warts was higher among White (13%) and Mixed (12%) women compared with others (Chi-squared = 18.2,  $p = 0.04$ ).

Among heterosexual men, univariate analyses indicated significant heterogeneity across ethnic groups in the prevalence of diagnosed gonorrhoea and genital warts (Table 4-7). 10% of first-time Black Caribbean and 7% of Black Other male GUM attenders were diagnosed with gonorrhoea on their first visit, significantly higher than any other ethnic

group (Chi-squared = 28.9,  $p < 0.001$ ). Gonorrhoea was not diagnosed among the Indian subcontinent or Other Asian attenders. For genital warts over 10% of White and Mixed ethnicity males were diagnosed with this infection, compared with between 0-5% of Black African, Indian subcontinent, and Asian Other men (Chi-squared = 18.2,  $p = 0.04$ ).

## **4.4 DISCUSSION**

This study highlighted marked variations in the demographic characteristics, behavioural risk profiles and diagnostic outcomes across a group of ethnically diverse first-time GUM clinic attenders. In this setting, being diagnosed with an acute STI was independently associated with ethnicity (men only), after controlling for age, site of attendance, and nature of the last sexual partnership.

### **4.4.1 Heterogeneity of GUM clinic attenders**

The data suggest that GUM clinic attenders are a heterogeneous group, varying by clinic of attendance, gender, sexuality and ethnicity – factors, which may influence the prevalence of diagnostic outcomes of interest.

The ethnic distribution of the GUM attenders differed significantly to that expected from the demography of Camden and Islington boroughs. As shown in Table 4-1, despite the ethnically diverse local population, the study sample had substantially more Black Caribbean and fewer Indian subcontinent attenders than anticipated from local demography, suggesting differential uptake of GUM services among these groups. Whether this reflects differential morbidity across groups, knowledge about services or ease of access to services was beyond the scope of this study. However, the variations in STI outcome data in this study suggest higher morbidity (i.e. greater need) in African Caribbean groups in addition to the high attendance rates. This differential uptake, and consequently biased population, again confirms why findings from GUM clinic studies are unlikely to be representative of the wider communities.

Despite being in the same (then) Health Authority and NHS Trust, the two study clinics had

distinct client profiles, which may have biased the interpretation of results had they not been taken into consideration. Differences were also observed between the study clinics.

Mortimer Market clients were somewhat younger, with larger proportions of homosexual males, cohabiting or divorced men and women, and a broader spread of ethnic minorities than Archway. These differences reflect local demography and underlying patterns of health-care access and utilisation – indeed, more detailed examination of residential postcodes confirmed the more local distribution of Archway compared to Mortimer Market attenders (data not presented). Therefore, the observed patterns of STI outcomes may reflect characteristics of the local population, and patterns of clinic utilisation, in addition to the background prevalence of infection.

Yet even among first-time attenders to a single GUM clinic, we were able to demonstrate significant heterogeneity in risk factors and diagnostic outcomes across ethnic groups. Asian and Indian subcontinent attenders were more likely to be married than other groups, with relatively high reported use of condoms at last intercourse. These groups were also less likely to have been previously diagnosed with an STI. Conversely, Black Caribbean groups were more likely to report having had a prior STI diagnosis, and lower levels of condom use at last sexual intercourse.

Re-infection with STIs suggests maintenance of, or relapse to, high-risk sexual behaviours or involvement in STI transmission networks following the initial episode. It may also indicate that the previous GUM clinic-based prevention interventions, e.g. counselling or treatment, were ineffective. Such diversity in the ‘background characteristics’ of clinic attenders must be taken into account when interpreting ethnic variations in disease outcomes. These factors are all determinants of STI transmission and may also have increased individuals’ likelihood of a recurrent STI diagnosis.

#### **4.4.2 Ethnic variations in diagnostic outcomes**

In concert with other GUM clinic studies in England (Lewis & Watters 1991; Low, Daker-White, Barlow, & Pozniak 1997), statistically significant associations were found between ethnicity and the diagnosis of specific STIs. Gonorrhoea was associated with Black

Caribbean ethnicity; genital warts with White and Mixed attenders; and bacterial vaginosis among Black Caribbean and Black Other ethnic groups (Llahi-Camp *et al.* 1996; Rajamanoharan *et al.* 1999). The study did not identify associations between Indian subcontinent and Asian Other ethnic groups with any specific STI, in keeping with their generally lowered STI risk. The reasons for these patterns of disease clustering are unclear, but may reflect differential patterns of health-care access, background disease prevalence and sexual mixing patterns in the wider community.

Highly ethnically assortative (i.e. with similar characteristics) sexual mixing within ethnic groups, as demonstrated among GUM clinic attenders by Barlow and colleagues (Barlow, Daker White, & Band 1997), may lead to persistent endogenous transmission of STIs. This is worsened if within the ethnic group, sexual mixing is disassortative by risk. Lauman (Laumann, Youm, & Aral 2000) explained African Americans' higher infection rate for bacterial diseases by their highly assortative partner choices (by ethnicity) and highly disassortative sexual mixing (by partner change) - meaning that 'peripheral' African Americans (who have had only one partner in the past year) were five times more likely to choose 'core' African Americans (who have had four or more partners in the past year) than 'peripheral' Whites were to choose 'core' Whites (Laumann, Youm, & Aral 2000).

Whilst this study was not designed to examine sexual mixing patterns in detail, the likelihood of disassortative (i.e. different characteristics) mixing within an ethnic group was explored in this data set by examining the gender disparities in reporting the most recent sexual partner as being casual, within each ethnic group. Compared to women within each ethnic group, the odds of men reporting their last sexual partner as being casual was highest among Black Caribbeans (OR 6.4), and lowest among Whites (OR 2.5), suggesting significant disparities in patterns of partnership choice, in this group of STD/GUM clinic attenders.

#### **4.4.3 Factors associated with an STI diagnosis**

This study of first-time GUM clinic attenders confirmed an independent association between ethnicity and the likelihood of being diagnosed with an STI. This was increased,

relatively to White attenders, for Black Caribbean men (adjusted odds ratio 1.92, 95% confidence interval 1.24 - 2.95) and lowered for Indian subcontinent men (adj. OR 0.44, 95%CI 0.19 - 0.99). The lack of condom use at last intercourse was a strong predictor of the likelihood of being diagnosed with an STI among men (adj. OR 2.76 95%CI 1.79 - 4.25).

A strong association between ethnicity and condom use at last intercourse was demonstrated in this study. Black Caribbean men were the group least likely to report this protective behaviour. Controlling for this factor would have removed an obvious confounder in the relationship between sexual behaviour and STI acquisition risk. On the other hand, it may be inappropriate to control for condom use if it is believed to be on the causal pathway – leading to ‘over-adjustment’ in the model. Among women, attending the MMC was associated with a lowered risk of being diagnosed with an STI, in part reflecting differences in the characteristics of the clinic clientele.

#### **4.4.4 Study limitations**

The study has some limitations. Patients’ self-identified ethnicity was based on categories currently used in the National Health Service which have been considered incomplete and restrictive (McKenzie & Crowcroft 1996).

The lack of ethnic sub-categories for White race, disregards the ethnic and cultural diversity of large populations of white European, North American and Australian residents in the United Kingdom. The *mixed* and *other* categories are not mutually exclusive and are hard to define in a multicultural metropolitan setting.

Finally, because of the relatively small numbers of clinic attenders from Indian, Pakistani and Bangladeshi ethnic backgrounds, I was forced to coalesce them into a single category (Indian subcontinent) to facilitate the data analysis. This illustrates one of the common limitations of GUM clinic studies in which the obtained samples may not be sufficiently large enough to address each sub-group of interest. In this instance, the small sample size of Asian sub-groups (due to their limited attendance at the study clinics) could have been overcome if an alternative recruitment method was employed (comparing outcomes across equal numbers of GUM patients of different ethnicities). Although this was considered,

however this would have necessitated sampling patients over a longer time frame than was possible at the time.

As a clinic-based survey, the study's findings cannot be extrapolated to describe the sexual behaviours or sexual health of ethnic minorities in the wider community. At the population level only a minority of those reporting risk markers for STI transmission will attend GUM clinics (Johnson, Wadsworth, Wellings, & Field 1996). Instead, the findings describe the distribution of behaviours and STIs among first-time GUM clinic attenders. The observed differences in STD risk may reflect varying levels of morbidity within different ethnic minority communities, differing thresholds for attending STD/GUM clinics or variations in access to services (since patients are free to attend clinics of their choice, away from their area of residence).

Finally, other limitations of the study reflect the constraints of retrospective collection of data from GUM clinics. Despite clinics using an agreed proforma to collect data from all first-time attenders, we were not able to collect sufficient information on socio-economic status or sexual behaviour in this study. Although each patient's occupation is routinely collected at registration, it was often poorly completed. In any case, an individual's occupation, on its own, would be insufficient to accurately determine social-economic status. Similarly, although some behavioural data was available (e.g. condom use at last penetrative intercourse, nature of last sexual partner) we were unable to collect information on other key behavioural determinants of STI transmission (e.g. number of sexual partners; partner acquisition; partner concurrency). This placed substantial limitations on our ability to control for other factors, which might account for the observed relationship between ethnicity and STI outcomes. Further exploration of these in a prospective GUM or population-based study are required.

#### **4.4.5 Methodological considerations**

This study highlighted the importance of STI definition/classification on the association between ethnicity and STI diagnostic outcomes. The powerful effect of including bacterial vaginosis as an STI on diagnostic outcomes among women was demonstrated. Its high

clustering within Black ethnic groups may be associated with genetic factors and with vaginal douching practices, rather than high-risk sexual practices (Mayaud 1997; Paige *et al.* 1998a; Rajamanoharan *et al.* 1999; Royce *et al.* 1999). Thus including it as an outcome of interest may inflate the odds of Black women being identified as being at increased STI risk. This demonstrates the importance of understanding which conditions are included as STI outcomes in GUM clinic-based studies.

## 4.5 CONCLUSIONS

This study was presented to demonstrate the utility and constraints of GUM clinic-based studies in understanding the relationship between ethnicity and sexual health outcomes. The study highlighted many of the problems of GUM clinic-based studies: heterogeneity between and within sites; heterogeneity between ethnic groups; and limitations in the availability of robust behavioural and socio-economic status data. Methodologically, the study showed the importance of utilising clear explanatory (e.g. ethnicity versus race) and outcome variables (e.g. whether to include BV as an STI) in exploring the relationship under investigation.

Despite these limitations, the study demonstrated an independent association between ethnicity and the likelihood of being diagnosed an acute STI (and also with a number of specific STIs) in this setting. The results suggest that levels of condom use, background disease prevalence and patterns of health-care utilisation and access may, in part, mediate these associations. In the following chapters, I present findings of further studies to explore the relative contribution of each of these factors.

**Table 4-1 Ethnic distribution of ethnic minority first-time GUM attenders compared with Camden and Islington (1991 census)**

Census ethnicity category	Distribution of ethnic minority population			
	Camden and Islington (%)	MMC* (%)	ASHC* (%)	Study sample* (%)
<i>Base ethnic minority population</i>	61,503 (100)	535 (100)	462 (100)	1017 (100)
Black Caribbean	18.6	17.0	34.8	24.7
Black African	23.0	21.1	21.9	21.0
Black Other	7.9	8.4	7.8	8.0
Indian, Pakistani, Bangladeshi	24.9	9.3	6.5	7.9
Asian Other	10.1	12.3	6.7	9.1
Other	13.3	9.9	15.4	12.2

\* Ethnic minorities patients in each clinic randomly selected



**Table 4-2 Characteristics of the selected sample of heterosexual first-time clinic attenders at the Mortimer Market (MMC) and Archway Centres (ASHC)**

Characteristic	Women, n(%)				Men, n(%)			
	MMC	ASHC	Total	Sign**	MMC	ASHC	Total	Sign**
Base:	486	480	986		442	384	826	
Mean age (SD):	28.2(8.7)	29.7(8.7)			31.2(9.2)	32.3(10.6)		
Ethnicity, n(%)	(n=486)	(n=480)	(n=966)		(n=327)	(n=345)	(n=672)	
White	243(50)	240(50)	483 (50)	Chi <sup>2</sup> =34.3	150(46)	162(47)	312 (46)	Chi <sup>2</sup> =18.9
Mixed/Other	35(7)	38(8)	73 (8)	P<0.001	18(5)	33(9)	51 (8)	P=0.004
Black African	64(13)	51(11)	115 (12)		49(15)	50(14)	99 (15)	
Black Caribbean	43(8)	92(19)	135 (14)		48(15)	69(20)	117 (17)	
Black Other	32(7)	22(5)	54 (6)		13(4)	14(4)	27 (4)	
Indian subcont.	22(5)	19(4)	41 (4)		28(9)	11(3)	39 (6)	
Asian Other	47(10)	18(4)	65 (7)		19(6)	9(3)	28 (4)	
Marital Status, n(%)	(n=464)	(n=121)	(n=585)		(n=317)	(n=74)	(n=391)	
Married	65(14)	35(29)	100 (17)	Chi <sup>2</sup> =32.1	56(18)	21(28)	77 (20)	Chi <sup>2</sup> =18.2
Single	309(66)	81(68)	390 (66)	P<0.001	185(58)	51(69)	236 (60)	P<0.001
Divorced	30(7)	4 (3)	59 (10)		28(9)	1(1)	29 (7)	
Cohabiting	66(14)	1(1)	67 (11)		48(15)	1(1)	49 (13)	
Source of referral:	(n=479)	(n=471)	(n=950)	Chi <sup>2</sup> =43.3	(n=315)	(n=343)	(n=358)	Chi <sup>2</sup> =34.0
GP	77(16)	141(30)	218(23)	p<0.001	62(20)	102(30)	164(25)	p=0.001
Self	99(21)	128(27)	227(24)		84(27)	109(32)	193(29)	
Hospital	131(27)	80(17)	211(22)		37(12)	60(17)	97(15)	
Other	172(36)	122(26)	294(31)		132(42)	72(21)	204(31)	
Reasons for attending, n(%)	(n=486)	(n=479)	(n=966)		(n=326)	(n=347)	(n=826)	
Symptoms	278(57)	268(56)	546 (56)	NS	200(62)	237(68)	437 (65)	NS
Screening	122(27)	132(28)	254 (28)		78(24)	74(21)	152 (22)	
C. tracing	46(9)	52(11)	98 (10)		38(12)	30(9)	68 (10)	
Other	29(6)	27(6)	56 (6)		9(3)	6(2)	15 (3)	
Proportion currently in a relationship:	(n=476)	(n=449)	(n=925)	NS	(n=313)	(n=310)	(n=623)	NS
	395(83)	368(82)	763 (83)		247(79)	257(83)	504 (81)	
Nature of last sexual partner:	(n=447)	(n=408)	(n=855)	NS	(n=305)	(n=291)	(n=596)	NS
Regular	422 (94)	390 (96)	812 (95)		280 (85)	242 (83)	502(84)	
Known/ Casual	25(6)	18 (4)	43 (5)		45 (15)	49 (17)	94 (16)	
Proportion using condoms at last penetrative sexual intercourse:	(n=397)	(n=285)	(n=682)	NS	(n=268)	(n=171)	(n=439)	NS
	147(37)	117(41)	264 (39)		102(38)	53(31)	155 (31)	
Proportion previously diagnosed with an STI*:	(n=445)	(n=438)	(n=883)	NS	(n=310)	(n=323)	(n=636)	NS
	89(20)	92(21)	181 (20)		90(29)	97(30)	187 (30)	
Proportion ever having had an HIV test:	(n=488)	(n=475)	101 (11)	Chi <sup>2</sup> =47.3	(n=323)	(n=325)	(n=648)	Chi <sup>2</sup> =73.0
	64(13)	38(8)		P<0.001	42(13)	13(4)	55 (9)	P<0.001

**NOTES:**

\* Excludes bacterial vaginosis

\*\* represents significance testing (Chi-squared) for heterogeneity between MMC and ASHC populations

**Table 4-3. Key demographic and behavioural characteristics of selected sample of heterosexual female STD/GUM clinic attenders by ethnicity**

Characteristic	Patient defined ethnic group n (%)							X <sup>2</sup> ** (2x n ) p-value
	White	Mixed/ Other	Black African	Black Caribbean	Black Other	Indian subconti nent	Other Asian	
Marital Status:	(n=296)	(n=41)	(n=75)	(n=62)	(n=34)	(n=28)	(n=53)	34.4
Married	39 (13)	9 (22)	20 (27)	7 (11)	1 (3)	11 (39)	13 (25)	p=0.01
Single	202 (68)	24 (59)	42 (56)	46 (74)	30 (88)	15 (54)	31 (58)	
Divorced	18 (6)	2 (5)	6 (8)	3 (5)	1 (3)	0 (0)	2 (4)	
Cohabiting	17 (13)	6 (15)	7 (9.3)	6 (10)	2 (6)	2 (7)	7 (13)	
Proportion reporting a previous STI*:	(n=457) 109(24)	(n=66) 10(15)	(n=107) 16(15)	(n=126) 29(23)	(n=53) 10(19)	(n=37) 4 (11)	(n=53) 5 (9)	13.0 0.04

**NOTES:**

\* Excludes bacterial vaginosis

\*\* represents significance testing (Chi-squared) for heterogeneity between MMC and ASHC populations

**Table 4-4. Key demographic and behavioural characteristics of selected sample of heterosexual male GUM clinic attenders, by ethnicity**

Characteristic	Patient defined ethnic group n (%)							X <sup>2</sup> (2x n ) *
	White	Mixed/ Other	Black African	Black Caribbean	Black Other	Indian subcontine nt	Other Asian	
Marital Status:	(n=182)	(n=27)	(n=62)	(n=53)	(n=16)	(n=31)	(n=20)	29.9
Married	31(17)	4(15)	12(19)	8(15)	3(19)	13(42)	6(30)	P=0.04
Single	105 (58)	19(70)	42(68)	33(62)	10(63)	15(48)	12(60)	
Divorced	16(9)	1(4)	6(10)	2(4)	0(0)	3(10)	1(5)	
Cohabiting	30(16)	3(11)	2(3)	10(19)	3(19)	0(0)	1(5)	
Proportion reporting previous STI:	(n=301) 83 (27)	(n=46) 12(26)	(n=94) 33 (35)	(n=110) 39 (35)	(n=27) 13(48)	(n=34) 3 (8)	(n=27) 4 (15)	18.4 0.005
Proportion reporting condom use at last penetrative sexual intercourse:	(n=204) 85(42)	(n=26) 9(35)	(n=77) 25 (32)	(n=74) 13 (18)	(n=17) 5(29)	(n=24) 7 (29)	(n=20) 11(55)	18.1 0.006

**NOTES:**

\* represents significance testing (Chi-squared) for heterogeneity between MMC and ASHC populations

**Table 4-5. MODELS I&II: Factors associated with being diagnosed with an STI**

Characteristic	Percentage %(n/n)	MEN		Percentage %(n/n)	WOMEN Unadjusted OR (95% CI)
		Unadjusted OR (95%CI)	Adjusted OR (95%CI)*		
Clinic of attendance					
ASHC	49 (149/384)	1	1	24 (114/475)	1
Mortimer Market	38 (121/318)	0.80 (0.59-1.10)	0.88 (0.62-1.2)	15 (70/466)	0.53(0.38-0.74)
Ethnicity:	p<0.001			p=0.6	
White	37 (115/311)	1	1	19 (89/311)	1
Mixed/ Other	39 (20/51)	1.1 (0.59-2.01)	1.10 (0.56-2.14)	18 (13/59)	0.97 (0.51-1.84)
Black African	47 (46/98)	1.5 (0.95-2.4)	1.49 (0.92-2.41)	18 (20/94)	0.93 (0.55-1.6)
Black Caribbean	53 (62/117)	1.92 (1.24-2.95)	2.04 (1.28-3.24)	26 (35/99)	1.55 (0.99-2.4)
Black Other	50 (13/26)	1.70 (0.76-3.80)	1.37 (0.59-3.18)	29 (10/44)	1.00 (0.48-2.1)
Indian subcont.	21 (8/39)	0.44 (0.19-0.99)	0.47 (0.20-1.14)	17 (7/34)	0.96 (0.39-2.1)
Asian Other	21 (6/28)	0.46 (0.18-1.17)	0.55 (0.21-1.44)	16 (10/53)	0.83 (0.40-1.69)
Nature of last sexual partner:	p=0.69			p=0.82	
Regular	42 (207/498)	1	1	20 (161/806)	1
Known/Casual	39 (37/94)	0.84 (0.50-1.2)	0.91 (0.57-1.45)	21 (9/42)	0.93 (0.60-1.4)
Reason for attending:	p<0.001		na	p=0.001	
Symptoms	47 (207/436)	1		24 (130/542)	1
Screening	19 (29/150)	0.27 (0.17-0.41)		10 (26/263)	0.35 (0.22-0.54)
Contact tracing	48 (32/67)	1.01 (0.60-1.69)		20 (19/96)	0.78 (0.46-1.34)
Other	6 (1/16)	0.07 (0.01-0.56)		14 (8/56)	0.52 (0.24-1.14)
History of prior STI:	p=0.64		na	p=0.39	
Yes	45 (84/186)	1		22 (40/182)	1
No	39 (176/449)	0.78 (0.55-1.11)		20 (136/710)	0.84 (0.56-1.25)
Condoms used at last penetrative sex**:	p<0.001		na	P=0.82	
Yes	25 (39/153)	1		18 (48/261)	1
No	49 (139/286)	2.76 (1.79-4.25)		18 (74/418)	0.95 (0.63-1.4)
Age:					
For every increase of one year		0.98(0.97-1.0)	0.98 (0.97-1.0)		0.99 (0.97-1.0)

**NOTES:**

\*Adjusted odds ratio (OR) obtained from logistic regression model containing ethnicity, nature of last sexual contact, age, and centre of attendance.

\*\* When condom use at last intercourse entered into model, it remained the only significant factor in the model: adjusted OR 2.66(1.69-4.19), and the significant association with Black Caribbean men disappeared: adjusted OR for 1.37 (95%CI 0.78-2.42). When interaction between condom use and race included, none was significant.

**Table 4-6. Model III: Sensitivity analysis including bacterial vaginosis as an STI**

Characteristic	Prevalence %(n/n)	WOMEN (Including BV as an STI)	
		Unadjusted OR (95%CI)	Adjusted OR (95%CI)
Clinic of attendance	p<0.001		
Archway Sexual Health	35 (169/476)	1	1
Mortimer Market	24 (117/482)	0.58(0.44-0.77)	0.54(0.35-0.85)
Ethnicity	p<0.001		
White	21 (130/480)	1	1
Mixed/ Other	28 (21/72)	1.03 (0.59-1.80)	0.50 (0.18-1.37)
Black African	29 (33/114)	1.1 (0.69-1.7)	0.51 (0.21-1.21)
Black Caribbean	40 (53/134)	1.76 (1.18-2.6)	0.85 (0.45-1.62)
Black Other	46 (25/54)	2.32 (1.31-4.1)	0.76 (0.29-1.98)
Indian subcontinent	24 (10/41)	0.87 (0.41-1.8)	0.69 (0.22-2.12)
Asian Other	24 (15/63)	0.84 (0.45-1.55)	0.80 (0.29-2.22)
Current regular sexual partner	P=0.70		
Yes	31 (253/806)	1	1
No	29 (12/42)	0.90 (0.62-1.3)	1.82 (0.61-5.36)
Age			
For every increase of 1 year		1.00 (0.98-1.0)	0.94 (0.91-0.98)
Type of contraceptive	P=0.042		
Oral contraceptive	28 (77/274)	1	1
IUD	54 (14/26)	2.98 (1.32-6.74)	1.99 (0.67-5.92)
Condoms	28 (76/271)	0.99 (0.68-1.44)	0.95 (0.59-1.53)
Other	33 (18/55)	1.24 (0.66-2.31)	0.87 (0.36-2.11)
Ever been pregnant	P=0.032		
Yes	37 (88/239)	1	1
No	29 (181/619)	0.70 (0.51-0.97)	0.60 (0.36-0.84)

**NOTES:**

\*Adjusted odds ratio (OR) obtained from logistic regression model containing ethnicity, nature of last sexual contact, age, and centre of attendance.

**Table 4-7 Prevalence of selected diagnosed acute STIs following first visit**

	Ethnic background							Chi-squared and p value**
	White	Mixed/O ther	Black African	Black Carib.	Black other	Indian subcon.	Asian Other	
<b>MEN</b>								
Percentage (%) diagnosed with any acute STI:*	36.9	39.2	46.9	52.9	50.0	20.5	21.4	22.5, p=0.001
Base	311	51	98	117	26	39	28	
Percentage (%) diagnosed with specific STI:								
Gonorrhoea	0.6	3.9	4.0	10.3	7.4	0.0	0.0	28.9, p<0.001
Chlamydia	3.2	7.8	7.0	10.3	7.4	2.6	3.6	NS
Genital Warts	12.5	11.8	3.0	7.7	7.4	5.1	0.0	13.1, p=0.04
Genital herpes	4.5	2.0	3.0	1.7	7.4	0.0	3.6	NS
Base	313	51	99	117	27	39	28	
<b>WOMEN</b>								
Percentage (%) diagnosed with any acute STI:*	27.1	27.8	28.9	39.5	46.3	24.4	23.8	16.6, p=0.01
Base	480	72	114	134	54	41	63	
Percentage (%) diagnosed with specific STI:								
Gonorrhoea	0.4	0.0	0.0	3.7	0.0	0.0	0.0	19.9, p=0.03
Chlamydia	3.5	5.5	0.8	7.5	1.9	4.9	6.2	NS
Genital Warts	7.5	4.1	0.8	4.5	7.4	0.0	1.5	14.0, p=0.03
Trichomoniasis	1.0	4.1	6.1	7.5	3.7	4.9	1.5	19.9, p=0.003
Genital herpes	4.0	2.7	5.3	3.0	5.6	0.0	0.0	NS
Base	481	73	114	134	54	41	65	

**NOTES:**

\*Includes Chancroid, Lymphogranuloma Venerum, Granuloma Inguinale

\*\* Chi squared and p values represent heterogeneity across ethnic groups

# Chapter 5.

## A community-based qualitative study of sexual attitudes and lifestyles

### CHAPTER SUMMARY

**Background:** Ethnic variations in the distribution of STIs may reflect differences in sexual risk behaviour; knowledge, attitudes and utilisation of GUM services; or disease burden within particular communities. Little is known as to why these differences may exist, especially the influence of culture on sexual or health seeking behaviours.

**Objectives:** To explore and compare awareness of, and attitudes towards, high-risk sexual behaviour, STIs (including HIV/AIDS) and GUM clinic services among five ethnic minority communities (Jamaican, Nigerian, Ugandan, Indian, Bangladeshi) resident in inner London.

**Setting:** Inner London boroughs of Camden and Islington

**Methods:** A community-based qualitative study involving one-to-one in-depth interviews using ethnic and gender-matched interviewers. Interviews explored: first sexual experiences and intercourse; sexual behaviour; use of GUM services; attitudes towards HIV/STIs; and safer sex. Interviews were taped and transcribed. Analysis was undertaken using Framework.

**Results:** The sample for the study comprised 63 people divided more or less evenly between sub-Saharan Africans (23), South Asians (21) and African Caribbeans (19). Marked variability was observed across the ethnic groups in all parameters. The Jamaican and African groups had higher levels of awareness about STIs and sexual health services compared to South Asian groups. They were also more likely to report high-risk lifestyles. Religious influences and adherence to cultural beliefs/ norms were particularly strong among the Bangladesh and Indians compared to the other groups. The study uncovered the various ways in which risk and safer sex are interpreted by communities, which have relevance to future sexual health promotion delivery.

**Conclusions:** In this community-based qualitative study we demonstrate ethnic variations in attitudes towards, and knowledge of, safer sex, conceptualisation of risk and sexual health services. The study confirms the multilayered aetiology of ethnic variations in sexual health with cultural background, gender, religion and degree of acculturation being main influencing factors.

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**Candidate's contribution to this work:** This study was funded by Camden and Islington Health Authority. I was an investigator and involved in all stages of the project. I undertook or contributed to all the analyses presented in this chapter.

## **5.1 BACKGROUND**

In Chapter 4, the GUM clinic study confirmed the existence of significant heterogeneity in the demographic and behavioural characteristics, STI and HIV testing histories, and prevalence of diagnosed STIs among a group of first-time attenders. However, as GUM clinic attenders are more likely to report high-risk sexual lifestyles compared with non-attenders (Johnson, Wadsworth, Wellings, & Field 1996), such heterogeneity may reflect culturally mediated patterns of health service utilisation, sexual behaviour or background disease prevalence in the community.

This study was therefore undertaken to explore cultural influences on health-seeking behaviours and attitudes towards safer sex, with a view to understanding how these may, in turn, influence the observed ethnic variations of sexual health outcomes.

### **5.1.1 Why use qualitative research?**

Qualitative techniques using in-depth interviews and flexible questioning in individual interviews are particularly suited to exploring the reasons why people behave in a certain way and the factors which influence them. Nevertheless, relatively few studies have used qualitative techniques to explore the nature, range and factors underlying ethnic variations in sexual health outcomes.

Qualitative approaches are important in their ability to provide a greater depth of understanding of the full range of experiences and attitudes. They are particularly appropriate for exploration of sensitive topics, the success of which depends on building a rapport and gaining the confidence of the interviewee.

Qualitative techniques can identify issues and concepts; clarify language and meaning; and explore perceptions, experiences, attitudes and behaviours in depth and with sensitivity. With appropriate sample selection, such factors can be explored in terms of differences and similarities between individuals as well as addressing the complexities of individual experience. For example, ethnographic studies employing participant observation, in-depth interviewing techniques and focus groups have uncovered many of the contextual

determinants of hyperendemic syphilis among rural Black communities in southeastern United States (Thomas *et al.* 1999; Thomas & Thomas 1999).

The research tools used in qualitative research provide an approach that is flexible and responsive to individual experiences and sensitivities, and the way that these are expressed. This approach can operate at different levels, exploring not only sexual lifestyles themselves, but also how people respond to talking about such attitudes and behaviours.

### **5.1.2 Chapter objectives**

This chapter is presented to illustrate the role of qualitative research in understanding the cultural influences on knowledge and attitudes towards STIs and GUM services. Specific objectives are to:

- 1) Describe the methodology for the community-based qualitative study;
- 2) Present findings related to awareness of, and access to, local sexual health services;
- 3) Examine the perceptions of sexual health promotion among these target communities;
- 4) Explore communities' suggestions for improving local sexual health services and health promotion interventions.

The chapter also explores in greater detail the attitudes of the Black Caribbean (Jamaican) respondents, as these were the largest and most homogenous group studied.



## **5.2 METHODS**

### **5.2.1 Exploring Ethnicity and Sexual Health (ExES) study**

The Exploring Ethnicity and Sexual Health (ExES) study was a community-based qualitative study of sexual attitudes and lifestyles undertaken among five ethnic minority groups within inner London. This study was undertaken in order to understand and explore the influence of culture and ethnicity on the sexual attitudes and lifestyles in inner London. It was a collaborative initiative between University College London Medical School, the National Centre for Social Research (previously Social Community Planning Research) and the then Policy Studies Institute (PSI). The study was funded by a grant of £97,000 from Camden and Islington Health Authority for a one-year period commencing November 1997. The principal study objectives were threefold:

- 1) To explore sexual attitudes, practices and behaviours among selected ethnic minority groups;
- 2) To provide an understanding of behavioural and cultural norms, related to sex and sexual behaviour among minority ethnic groups;
- 3) To identify the personal, cultural and other factors that influence sexual lifestyles.

As a secondary objective, the study was designed to aid in the development of research methods/techniques (i.e. sample design and access, question coverage, language, interview techniques, topic boundaries, special sensitivities etc.) for undertaking future quantitative studies of sexual attitudes and lifestyles among the target ethnic minority communities.

### **5.2.2 Sample design**

Qualitative research seeks to both map out diversity within a given community as well as provide explanations of attitudes and behaviours. It is therefore essential that qualitative samples are designed to include range and diversity. This is often achieved by setting quotas and using selection and recruitment procedures, which ensure that different types of people have a chance of being included in the sample. The population for study comprised people aged 16 to 45 from the Jamaican, Black African and South Asian communities living in

Camden, Islington or neighbouring inner London Borough(s)<sup>ii</sup>.

Within these three broad ethnic groups: the study focused on five specific communities: Indian; Bangladeshi; Jamaican; Nigerian and Ugandan. The groups were selected because they form significant proportions of the British Black and ethnic minority population as a whole and represent key communities living in the area covered by the local (Camden and Islington) Health Authority which funded the study (see Box 5, page 81). The target sample for each of the three study groups was set at between 20 to 25, with a maximum total sample of 70. The sample was designed in order to ensure maximum diversity in terms of socio-demographic characteristics and other key variables. Key constituencies used to design the quota-based sample included: age, gender, partnership status, children, household tenure, and employment status.

### **5.2.3 Sample recruitment**

The key recruitment stages for ExES are summarised in Box 7 (page 107). Given the variations in the distribution of Bangladeshis and the relatively low number of people from the four other ethnic groups in Camden and Islington (see Box 5, page 81), the identification and selection of respondents needed to be designed to ensure that recruitment was not prohibitively costly or time-consuming. Thus targeted recruitment was undertaken in areas with high ethnic minority populations using focused enumeration and street identification of potential respondents.

#### **Box 7. Objectives of ExES recruitment**

- 1) Locate people from the five ethnic groups in Camden and Islington
- 2) Ensure that the selection of respondents for in-depth interviews is diverse in terms of age, gender, country of secondary school education, partnership status and travel to country of family origin
- 3) Ensure that respondents understand the aim and subject of the interview
- 4) Reassure respondents of confidentiality; Address respondent concerns about the subject matter

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<sup>ii</sup> Because of certain difficulties surrounding sample design and response, it was necessary to recruit some of the sample from other London Boroughs (see Appendix II).

- 5) Book appointments with appropriate interviewers taking into account respondents preferences in terms of gender, ethnic group, and community language

### **Household screening**

The samples were selected through household screening in areas known to contain relatively high proportions of the communities concerned. These areas were determined through inspection of small area statistics for Camden and Islington, exploring the population ethnic size at the ward level. A sampling frame of electoral wards was drawn up for each ethnic group. Recruitment was then focused, though not solely, in those wards where there were higher numbers of residents from the five ethnic groups. Trained recruiters (a subset of National Centres field-force) were then sent to the selected wards; asked to select a street as a starting point; and to work through the ward, street by street, varying the streets selected to include different types of housing and areas.

Recruiters were asked to search for households containing people from one of the relevant ethnic groups using a form of *focused enumeration* (focused enumeration involves having interviewers visit every *n*th address in a defined area and asking about the ethnic origin of those living at the visited address and at the '*n*' addresses on each side of the visited address. If positive identifications are made and people of ethnic minority groups are said to live at the non-visited addresses, the interviewers are instructed to visit those addresses in person). Although this approach could not provide positive identification of the target ethnic groups, it can give an indication of the streets or addresses with only White or elderly residents, so reducing fruitless door-knocking. Some caution needs to be exercised in using this approach with certain ethnic groups so that certain venues e.g. shops or restaurants, are not over-sampled.

### **Street identification**

Although the majority of recruitment was conducted from households, respondents were also identified through contacts made with people identified in the targeted streets from the selected ethnic groups. Recruiters were given permission to identify up to two people per ethnic group in this way. This was then followed by the screening interview at their home address. The numbers identified in the street were limited to ensure that biases were not introduced into the sample by the selection of more active people or those more likely to be

out during the day. It was also restricted in order to limit biases arising from using visual indicators to select people from ethnic groups. Selection of respondents through community groups, although convenient, would be subject to considerable selection bias and not yield a sample representative of all elements of the community under investigation.

Recruiters were asked to keep a record of all calls, including no reply, non-eligible and refusals. Employees of Camden and Islington Health authority or anyone engaged in work related to sexual health/health promotion were excluded from participation in the study. As was customary with NatCen projects, recruiters were required to register with the police station and leave a copy of the approach letter before entering any area.

#### **5.2.4 Sample selection**

Once an eligible household (i.e. one containing one of the five ethnic groups) was identified a full explanation of the study was given to the adult member and a short screening questionnaire was administered by experienced survey interviewers<sup>iii</sup>. All screening was undertaken in respondents' own homes by the recruiters with the aid of a screening questionnaire (see Appendix 6 for study materials). The screening questionnaire collected information needed to establish age eligibility for the study and the quota criteria for purposive selection: gender; age; religion; languages spoken; ethnicity; partnership status; country where had secondary school education; last visit to home country or country of origin. As a courtesy, verbal parental (or guardian) agreement rather than formal consent or permission was sought for those aged 16-17 as they are considered adults for social research purposes. After the screening questionnaire was completed, the recruiter checked a separate quota sheet for the relevant ethnic group to confirm whether the screened individual could be invited to join the study.

Selected individuals were then invited to take part in an interview and arrangements made for the study interviewers to visit the participant for the in-depth interview. Participants

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<sup>iii</sup> The interviewers were members of NatCen's panel of survey interviewers. Some of the screening and recruitment was also carried out by members of the research interviewing team.

were asked if they had any particular preferences regarding the ethnic origin or gender of the interviewer and the language in which the interview would be conducted. Recruiters assessed how important interviewer preferences were, and respondents were told that every effort would be made to meet them. In circumstances where the preferences could not be met, appropriate alternatives were suggested. Finally, all the households that were approached to take part were left written information about the purpose and coverage of the study and the research organisations involved.

### **5.2.5 The interviewers**

Because of the study's subject matter and the populations to be covered, it was felt important that the interviews should be conducted by researcher/interviewers from similar ethnic backgrounds. Only one of the principal investigators (the author) is of a matching ethnic origin (Jamaican) and additional Jamaican, Asian and African interviewers were therefore needed. Five people joined the project, primarily for the fieldwork stage, including a Sylheti and a Gujarati speaker. As far as was possible, this allowed respondents and interviewers to be matched in terms of broad ethnic group, language or gender where this was requested by the sampled individuals. All interviewers were required to participate in a two day training and briefing programme run by the investigators and specialist interviewers from NatCen. The training days included briefing on the project aims, nature of qualitative research, and practical sessions in the conduct of interviews and the use of the *ExES* topic guide. The interviewers worked closely together in three small teams (African, Asian and Jamaican), each team headed by one of the investigators who was also involved in conducting interviews.

### **5.2.6 Quality control measures**

A variety of quality control measures were employed throughout the study and are summarised in Box 8 (page 111). Quality control was maintained by: principal investigators listening to interviews from each team member and providing feedback; team heads listening to interviews and providing feedback throughout the study; and regular contact between the core and extended research team. In addition, preliminary analyses (report chapters) were sent to advisers drawn from community-based organisations currently

undertaking sexual health promotion work with the targeted communities. Finally, where appropriate and possible, we attempted to triangulate our research findings with other published studies, for example, from the National Survey of Sexual Attitudes and Lifestyles.

**Box 8. Summary of quality control mechanisms implemented in the ExES study**

- 1) All principal investigators involved in developing topic guide
- 2) All investigators involved in piloting topic guide with respondents
- 3) A single experienced researcher reviewed transcripts from each interviewer and provided independent feedback to ensure consistent standard maintained across groups
- 4) Meticulous records kept of interviews and observations about the interview
- 5) Interpretative procedures discussed and agreed before analysis
- 6) Interviews coded by single researcher, but coding randomly assessed by the single experienced qualitative interviewer
- 7) Validated method of data coding used (Framework) by all investigators. Thematic frameworks derived from grounded theoretical approach
- 8) All transcripts archived and available for external inspection or re-analysis

**5.2.7 The interviews**

The interviews were interactive and exploratory in form, and based on a topic guide which outlined key areas for investigation (see Box 9, page 112 and Appendix 5). They were carried out in the participants' own homes. All interviews were tape-recorded and subsequently transcribed *verbatim*. Where interviews were conducted in a language other than English they were later transcribed by the person conducting the interview.

The subject areas covered in the study included: sexual history; current relationships and lifestyle; sexual orientation, sexual practices and their importance; social, religious and cultural influences on sexual attitudes and practices; sexual health; and methodological factors that may influence participation in, and response to, different forms of research.

At the end of the interview, participants were offered a £15 token of appreciation in recognition of the time spent on the in-depth interview. All respondents were asked whether they needed to discuss any of the matters raised with another independent, experienced health-care professional. A list of relevant helplines and local GUM clinics were also offered to, and left with, each respondent.

### 5.2.8 Analysis

A full set of *verbatim* transcripts was produced from the tape recordings of the interviews. The analysis was then undertaken using 'Framework', a manual method of qualitative data analysis which involves ordering and synthesising *verbatim* data within a thematic matrix. For each transcript, this process was undertaken by the researcher who carried out the interview so that any cultural meaning or understanding found in the data could be retained. The further classificatory and interpretative analysis of the data was then carried out by the principal investigators using the analytic charts.

Data validation was achieved using a number of mechanisms. Ethnically matched interviewers undertook the initial stage of data analysis involving identification of key themes and constructs in the framework analysis. This allowed culturally appropriate interpretation of the data, while remaining grounded in the data. Data were analysed using the split-half technique, in which the data was analysed in two parts, the initial half involving construct development and the second half being used to verify and develop emerging themes. Following analysis, the study's findings were fed back to the interviewers and a range of ethnic minority community groups.

#### Box 9: The ExES topic guide

##### 1. Personal Circumstances

Gender, age, area of residence, employment status, marital status etc.

##### 2. Learning about sex

1. How first found out about sex?
2. Other ways sex was found out about
3. What sort of things were learnt about sex?
4. Influences on learning and views about sex?

##### 3. Sexual History and relationships

1. First sexual experience of any kind
2. First-time had sexual intercourse

**Box 9: The ExES topic guide**

3. Sexual encounters and relationships since
4. Current relationship
5. Contraception, and family planning.
6. Attitudes towards different types of sexual relationships
7. Attitudes towards different types of sexual practices

**4. Travel and sex**

1. Contact with home country / country of birth
2. Holidays

**5. Safer sex**

1. Understanding and awareness of safer sex
2. Extent to which safer sex followed
3. Types of experiences which are not safe

**6. STDs and HIV infection**

1. Awareness of any infections or diseases which may be picked up by sex.
2. Awareness of the symptoms and signs of STDS
3. Sources of treatment of disease or infection
4. How important is it to avoid STDs

**7. Attitudes towards being questioned**

1. Attitudes towards taking part in the project
2. Attitudes towards types of questions asked
3. Attitudes and preferences for type of interviewer
4. Anything not talked about in this interview and why?

**5.2.9 Critical examination of researcher's own role, potential bias and influence**



Coming from the same ethnic background as the Jamaican respondents meant that extra care had to be taken in the interviews to ensure that familiar concepts (to Jamaicans) were adequately probed and explored, that language and colloquial speech were unpacked, and the researcher-interviewee relationship was maintained. The latter proved essential in allowing respondents to be confident of the research being undertaken and feeling at ease with the research process. The benefit of being ethnically matched however meant that many Jamaican respondents expressed a sense of pride about seeing a Black researcher doing a study of this nature; and also a sense that our community was beginning to 'own up' to its problems.

## **5.3 RESULTS**

The comprehensive nature of the ExES study enabled the exploration of a wide range of cultural, social and behavioural issues related to sexual health outcomes, and a major publication has arisen from this work (Elam, Fenton, Johnson, Nazroo, & Ritchie 1999). For the purpose of this thesis however, key findings related to the sample characteristics, knowledge and utilisation of sexual health services, attitudes to and practice of safer sex are presented in detail.

### **5.3.1 Sample characteristics**

The sample for the study comprised 63 people divided more or less evenly between sub-Saharan Africans (23), South Asians (21) and African Caribbeans (19), (Box 10). Within these groups, five specific communities were covered ensuring some homogeneity in the ethnic and cultural identities of those interviewed. By design, there were approximately even numbers of men and women in each group; a reasonable range of ages from late teens to early forties; and a mix of both marital and partnership status. Just over half the sample had children (mostly under 16); the majority of the sample were tenants, although a relatively high proportion of the Asian sample lived with their parents; and around half of each of the samples were in paid employment, the rest being either in full-time education (Asian and African samples particularly), unemployed, or looking after the family and home.

**Box 10. ExES Study: Ethnic distribution of achieved sample**

Major ethnic group	Countries of origin	Numbers interviewed
Black-Caribbean	Jamaican	19
South Asian	Indian	11
	Bangladeshi	10
African	Nigerian	12
	Ugandan	11

Around two-thirds of the Jamaican sample were born in the United Kingdom, the rest in Jamaica (Table 5-1, page 132). The Asian and African samples included much higher proportions born in the country of their ethnic origin. The proportions who had received part or all of their secondary education in the United Kingdom varied considerably between the study groups. Around three quarters of the Jamaican sample had been educated in the United Kingdom compared with half of the South Asian sample and a third of the Ugandans and Nigerians. Half of the Bangladeshi women interviewed had received no secondary schooling at all.

**Length of residence**

Residency in the United Kingdom ranged from two or three years to several decades. Among all the communities there were four distinct groups: United Kingdom born as members of the second or third generations of families migrating in the late fifties, sixties or early seventies; long term residence since childhood, again, often as second generations of migrant families; long term adult residents who came to live in the United Kingdom as adults often during peak periods of immigration from their home countries; and recent immigrants who have come to live in the United Kingdom within the last 10 years, either to join other members of the family or for educational reasons or asylum.

**Regional groups**

For the African samples, regional or 'tribal' groups were seen to play a key part in determining the cultural or ethnic identity of individuals. This was particularly so for those who had come to live in the United Kingdom as adults; and least so for those who

described themselves as Anglo-African, all of whom had one parent who was White British. Among those interviewed, there were members of the Yoruba and Ibo groups within the Nigerian sample<sup>iv</sup>; and members of the Bugandan, Bunyoro, Kuman and Luo communities among the Ugandan samples. Each of these groups<sup>v</sup> has different languages and dialects within them. There was also diversity in terms of family structures, gender roles, behavioural norms and 'moral' beliefs and values.

### **Homosexual respondents**

It was intended that each of the three main samples should contain a small number of gay men and lesbian women (two to three) in order to ensure that the perspectives of those with homosexual experience were represented. In the event, it proved extremely difficult to identify and recruit homosexual people for the study from South Asian and Nigerian backgrounds. As a consequence, the distribution of gay men and lesbian women was more restricted than was intended (see Table 5-1, page 132).

### **5.3.2 Knowledge of local GUM services**

Knowledge of HIV and AIDS was fairly universal among all of the ethnic groups and among both men and women. However, the depth of knowledge varied, partly because of its immediate relevance to some groups of people. None of the Bangladeshis or Indians knew or had spoken to somebody who had been treated for an STI. So, although almost all of them were familiar with the terms HIV and AIDS and knew that these were infections, there was limited knowledge beyond this. However, they were usually able to report that they were transmitted through sex or 'blood mixing' and that condoms reduced the risk of transmission. Importantly, some also thought that other forms of contraception, such as the pill and IUDs, also *protected* from HIV transmission. Apart from HIV and AIDS, Bangladeshis and Indians commonly had no, or very little, knowledge of other STDs, although those who had been educated in Britain had most knowledge. Some were able to

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<sup>iv</sup> A third group, Haas, which is dominant among the United Kingdom population of Nigerians was not represented in the sample.

list a number of illnesses - 'HIV, clap, herpes . I know there's loads of them probably' (B10) - and they were also able to describe some symptoms such as discharge, itching and burning. But, for the most part, their knowledge of STDs other than HIV and AIDS was neither specific nor detailed.

In contrast, the Nigerians and Ugandans had detailed knowledge of matters relating to HIV and AIDS and they also had a lot of knowledge about other STDs. Many of them knew people who had had STDs and many of the Ugandans had friends or family members who were HIV-positive. Similarly, Jamaican respondents were, on the whole, well-informed about issues relating to HIV and AIDS. This was particularly so in terms of routes of transmission of the virus and identifying risk groups, although there was less clarity about the symptoms of AIDS. They also had knowledge of other STDs, being able to mention diseases such as gonorrhoea, crabs and thrush, and, although they did not have detailed knowledge of symptoms, some were aware of the significance of penile or vaginal discharge. Some of the Jamaicans also knew people who were HIV-positive and a number had friends who had been treated for infections.

### **5.3.3 Sources of sexual health information**

The information that the respondents knew about HIV, AIDS and other STDs had come from a variety of sources, including their personal experiences and knowledge of people who had had STDs or were HIV-positive. For all groups, general media sources were important, with information coming from advertising campaigns, fictional stories on the TV and radio that had characters who were HIV-positive, and news stories about famous people who had AIDS. GPs and leaflets found in GP surgeries were also a very important source of information, particularly for the Bangladeshis and Indians. Many of the Bangladeshis and

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<sup>y</sup> Each of the groups cited originate from different regional states of Nigeria and Uganda.

Indians had received no sex education, either formal or informal, and they were not acquainted with people who had had STDs.

#### **5.3.4 Use of specialist GUM services**

In the Jamaican and African groups, there were both men and women who had used health services for sexual health problems. Most had used them to obtain information or advice on matters relating to sexual health, including options and provision for contraception. Those who had not used specialist services knew about them and how to find out how to access them. However, the Bangladeshis and Indians had, at best, only a vague awareness of the specialist services that were available. For example, only some knew that such clinics existed and had an idea of how they would find them if necessary. Also, they had not used their GP for services beyond contraception and sex education. Nevertheless, as described above, their GPs were an important and, in some cases, only source of such information.

#### **5.3.5 Access to alternative sites for sexual health concerns**

Across all of the groups there were mixed views as to whether a GP or GUM clinic would be the best point of contact for someone needing advice or treatment. These views are summarised in Box 11. Many reported that they would use their GP as the initial point of contact. Here, trust of a GP and familiarity with the patient and the patient's medical history, were important. For example, an Indian man noted that his GP had not told his parents about his 'dope' smoking. But also important was the ease of access to a GP and the time that she or he could devote to them. Of course, many recognised that their GP would refer them on to specialist services, if necessary, for blood tests or treatment.

In contrast to this more general view, some felt that their GP knew them and their families too well for them to feel comfortable consulting about sexual health problems. So, the anonymity and total confidentiality that a GUM clinic could offer was seen as important. However, visiting a GUM clinic was thought to carry risks, of stigma and of discovery. Unlike a GP visit, if you were seen going into a GUM clinic people would know why you were there and may assume that you are HIV-positive.

**Box 11 Views on using GPs and GUM clinics**

GP	Familiarity, trust, easy accessibility Not anonymous
GUM clinics	Anonymity and total confidentiality Good for check-ups Medical staff can be unsupportive and condescending

People who were familiar with the structure of sexual health services suggested that they might bypass their GP and go straight to a GUM clinic. Indeed, some Jamaican users of sexual health services attended GUM clinics regularly regardless of symptoms. These tended to be young, sexually active men with frequent casual or short term partners. They were aware of their high-risk behaviour and wanted 'to be sure that everything is alright', so they attended clinics for check-ups. Having check-ups was also driven by their awareness of asymptomatic STDs and wanting to know about problems, including HIV/AIDS, earlier rather than later.

**5.3.6 Experiences in GUM clinics**

Some attenders reported positive experiences of visiting GUM clinics, where the staff were found to be helpful and supportive. Others, however, reported bad experiences and were particularly critical of the doctors. Doctors were said to have poor attitudes; to be poor listeners; to be condescending; and to object to people coming for check-ups rather than with symptoms. These negative experiences had led many to use only their GP when they wanted help or advice on sexual health. In fact, most users of sexual health services would have infrequent or one-off contact with their GP about sexual health problems only when such problems arose.

Those who had not had sexual health problems or who had not identified themselves as possibly at risk, did not feel a need to use either specialist services or their GP for sexual health matters beyond contraception. But, among those who had not used such services, there were some who had made a conscious decision not to use sexual health services. This was largely because of their fear of being found to be infected - 'I could not cope . would prefer not to be told of risk or disease', or because they felt too uncomfortable discussing such matters with a health worker.

### 5.3.7 Perceptions of safer sex

#### Definition and understanding of safer sex

Safer sex was an everyday term with which men and women from all five communities were familiar. It was often used interchangeably with condom use. When explored further, it became clear that many individuals interpreted and understood safer sex at a more intricate level and to many individuals, the concept of safer sex was not clear cut. Concepts of safer sex varied among the study communities, across ages and between gender. Four main themes appeared consistently: The concept of safer sex as *being careful* or taking care; safer sex meaning *protection* from the unwanted effects of sexual intercourse; safer sex required *staying in control*; and finally, safer sex meaning *stability* in relationships. These concepts are discussed in further detail below.

#### Safer sex = Being careful

Safer sex was chiefly perceived in terms of being careful in order to *protect* against, to *prevent*, or to *preserve your body* against such unwanted outcomes as HIV/AIDS, other STDs, pregnancy, emotional distress or physical harm. A key motivational factor to many respondents was their responsibility as a carer or the head of the family. This induced an additional need to take care in order not to jeopardise health and consequently the ability to care for loved ones, '*I've got to be careful for them*'.

The importance of being careful varied among communities, however, there were some common motivating factors. Being careful often accompanied a concept of *discretion* within a sexual lifestyle to avoid unwanted consequences (e.g. STD, pregnancy) or reputations. Among Jamaicans the concept of being careful to protect the enjoyment and pleasure of the sexual relationship was mentioned and perhaps reflected the importance of protecting a positive and active sexual life.

### Box 12 Strategies for being careful

Range of safer sex practices mentioned by respondents in the ExES study:

- 1) Condom use,
- 2) Abstinence
- 3) Known partner and sexual history
- 4) HIV testing
- 5) Having one sex partner
- 6) Avoiding blood transfusions
- 7) Trust in partner

### Safer sex = Protecting against disease or pregnancy

Safer sex was also perceived as protecting against the sources of risk of STD or other negative outcomes. Whereas unprotected sex (i.e. sex without a condom) was regarded as unsafe and risky, this was modified to take into account the source of risk. The source of risk was often described in terms of promiscuity, having sex with more than one partner, having sex with partners with unknown sexual histories, or hardly knowing the partner at all (see Box 13, page 121).

Among African and Jamaican respondents, a wide variety of STDs that could be prevented by safer sex were mentioned. Among the Asian men and women, there was greater awareness of HIV and less of other STDs. Among the women from all communities, the risk and fear of pregnancy overshadowed worries about disease. This was most marked among young sexually active unmarried women in Ugandan, Nigerian and Jamaican communities, given the social taboos associated with unwanted pregnancies.

### Box 13. Sources of risk

Sources of risk identified by respondents in the ExES study:

- 1) More than one partner
- 2) Promiscuous partner
- 3) Unknown partner or sexual history
- 4) Partner with HIV or other STD
- 5) Some sexual practices e.g. oral sex, anal sex, rubbing, sex without foreplay, kissing

Unwanted pregnancy was linked with trouble, with the potential for lone parenthood,



abortion, or the shame of having sex before marriage. Younger Jamaican, Nigerian and Ugandan women considered unplanned pregnancy to be too much of a responsibility and a disruption of personal aims. Contraception rather than saving sex for marriage was considered the appropriate choice. As many young Indian and Bangladeshi women were sexually inactive or awaiting sexual intercourse within the context of marriage, protection from pregnancy was less of an issue.

For men from all communities, perceptions of protection focused more on disease prevention than avoiding pregnancy. Prevention of pregnancy featured as a concern mainly among younger sexually active men for reasons similar to those for young women mentioned above.

#### **Safer sex = Staying in control**

For some individuals, safer sex meant having control over sexual feelings or expression through chastity or maintaining a monogamous lifestyle. This dimension applied to those with strong religious beliefs and an attachment to marriage as a preferred context for sexual expression. This was most evident among older African women and Asian men and women of all ages. The ideal of staying in control applies to all stages of a sexual career, from reserving sex for marriage to marriage itself. Self-control was a key to self-respect, fulfilment of religious ideals, and demonstrating respect of parents. Throughout marriage, self-control prevents infidelity. Lack of self-control is associated with promiscuity. People who have sex all the time, who meet partners in bars, were regarded as people who cannot control themselves, and therefore at risk of disease.

Another aspect of staying in control involved conservative sexual practices or conservative attitudes towards sex. These often stemmed from a belief that it is important to use sex in the right way, to produce children and maintain the marriage. Associated was the belief that particular sexual practices e.g. oral or anal sex should be avoided.

#### **Safer sex = Stability**

The fourth dimension of safer sex was *stability*. Stability within partnerships was achieved through choosing a good and faithful partner; monogamy; or conservatism in sexual

relationships. Taking time to know a partner is a key aspect of fending off risk of disease, physical harm or emotional distress. A good choice of partner is made by not mixing with 'risky' people, and taking time to know partners before embarking on a sexual relationship. Once a relationship was established, then faithfulness was seen as essential to the emotional stability of the partnership and family. Casual sex was regarded by women in all five communities as a risky and unstable activity on a number of levels, including the risk of emotional distress, greater potential of physical harm from having sex with strangers, and from ignorance of the partner's sexual history. This view was less prevalent among men.

### **5.3.8 Sources of information about safer sex**

Sources of information about safer sex and disease varied between generations and between men and women. Safer sex was a familiar term, but generally, information about safer sex and STDs or HIV was gained during the sexual career. It was not uncommon for older men and women to have begun their sexual careers with no knowledge of condoms. Younger people had greater awareness of condoms at an early age, but knowledge of STDs was sometimes vague.

Sources of information on safer sex, STD and pregnancy included formal and informal mechanisms. Formal mechanisms (parents, school, etc) were a less common source of information for older respondents, but more so among young individuals who had sex education during the 1980s and 90s. Informal mechanisms (media, friends, movies etc) were more important for most respondents and reflected the wealth of sexual health information now available through television, other media, and outreach work.

### **5.3.9 Risky sexual practices**

#### **Definition and understanding of 'risky sex'**

The understanding of what constituted safer sexual practices varied among communities and ages. People from all communities continually identified the committed monogamous relationship as a safe environment for risk-free sexual practices. The concept of risky sexual practices only became important when one did not know or trust their partner.

Sexual practices such as oral sex, anal sex, rubbing the tip of the penis on the clitoris (sometimes known as Western or African jazz, mentioned solely by the Ugandans), or sex without foreplay, were regarded as risky. The latter three practices are regarded as risky due to the potential for dry condoms breaking and infection through abrasions. More common, were concerns about infection through saliva, or cold sores during oral sex among some of the men and women, a concern which strengthened dislike among those unconfident in oral sex, and among those who regard oral sex as unnatural or unpleasant.

In contrast, there was a view that African men and women are at risk from infection through cuts or abrasions to the penis or vagina because of a lack of foreplay and therefore, dryness of the vagina. African men were sometimes regarded as too quick, rough, and not interested in pleasing women during sex. Not all of the men and women shared the view that men avoid foreplay some had very positive experiences of foreplay and regarded it as an important part of sex. There was very little evidence of worry among the study communities about the safety of kissing and the possibility of infection through cuts or saliva.

### **5.3.10 Ethnicity and condom use**

Broadly two distinct patterns of condom use emerged from the data.

#### **Consistent condom users**

Consistent condom use was common among the younger Jamaican, Nigerian and Ugandan men. Some were very active in assessing whether their partners were safe; others were too shy to talk about sex, or had not ever considered that a girlfriend might be risky in terms of STDs, but still used condoms consistently. One Jamaican young man who had multiple concurrent partners viewed condom use as essential to permit him to practice this lifestyle safely. One exception to this was a middle-aged Jamaican woman who had one single lifetime sexual partner and who continued to use condoms because of personal preference.

Condoms were thought to be readily available, and obtaining them was not viewed as problematic. However, some men did not think that their behaviour was always typical of their peer group, and described others as having a more *relaxed* attitude to condom use.

### **Reluctant condom users**

Among men and women using condoms in their relationships, there was a lingering dislike of condoms and reluctance to use them in the long term. There was a view that men, and particularly African men, do not like condoms. Some women also found condoms clinical and preferred the pill for contraception. Condoms were not used by any of the currently married women, but where they were used in other relationships it was often at the insistence of the women. Active users of condoms in casual relationships agreed that condoms were not necessary in marriage.

### **Using condoms to prevent adverse outcomes**

Pregnancy was perceived to be a greater risk than acquiring STD among younger African and Jamaican women. Consequently, condoms are only used when this was a preferred method of contraception. The rhythm method, known as the safe period, was popular among the married African women, generally at the suggestion of the GP when other methods, such as the pill and the coil, have been rejected. The pill was more popular among the younger women at an early stage of their sexual career.

Long-term condom use was rare except among gay men. Among the gay men, condom use during all penetrative intercourse was regarded as automatic and unquestionable.

Reluctance to use condoms was more characteristic of heterosexual men and persisted throughout relationships. When condoms were the preferred contraceptive method of women, they had to be strong willed and persistent in persuading their partners to agree and continue to use condoms.

## **5.4 DISCUSSION**

This was, to our knowledge, the first community-based qualitative study of sexual attitudes and lifestyles to be undertaken in Britain's Black and ethnic minority communities. The findings present valuable contextual information for interpreting ethnic variations in sexual

health outcomes.

#### **5.4.1 Key findings related to utilisation of sexual health services**

This study showed marked differences in the levels of awareness, access to, and utilisation of sexual health services across the five ethnic groups studied. The data therefore confirm the findings from the GUM study of differential patterns of uptake of local GUM clinic services as illustrated in Chapter 3. Although all communities were aware of HIV/AIDS and sexually transmitted diseases, it was clear that the degree of engagement varied substantially. This ranged from highly theoretical knowledge with no engagement among Bangladeshi communities, to the high levels of awareness and uptake among the Black Caribbean community.

The high levels of awareness among respondents could reflect some participation bias. As with any study of this nature, it is possible that those interviewed were more likely to have positive attitudes and greater knowledge than those who refused. Differences in the depth of knowledge individuals had seemed to depend partly on the level of both formal and informal sex education they had received as children and young adults, and partly on the immediate relevance of STDs to some groups of people. So, among Bangladeshis and Indians the knowledge of STDs and HIV was neither specific nor detailed, although those who were younger and sexually active were more informed. While, Jamaicans, Nigerians and Ugandans were generally well-informed about issues relating to HIV and AIDS, and they also had knowledge of other STDs.

The provision of sexual health promotion and sexual health services raises a number of difficulties, regardless of the population group that is being targeted. Central to this is the need to provide public education and services for what is essentially considered to be a private topic. For ethnic minority groups, who may not speak English well, or who may not read in either English or their own language, the provision of information on sexual health becomes more difficult and needs to be conducted in more personal ways. What may appear to be easily accessible poster, leaflet and TV campaigns may fail to reach these groups.

Views on sexual health services were somewhat less reassuring. Specialist GUM services

(not necessarily those in Camden and Islington) came in for a number of criticisms and central to these were issues relating to cultural sensitivity. Respondents generally felt that GUM staff should receive cultural awareness training, in the hope that this would improve their attitudes and ability to communicate with ethnic minority patients. Respondents were particularly critical of the doctors working in specialist services, saying that they misunderstood the reasons patients had for consulting, discouraged patients from coming for check-ups, were impatient and poor listeners, and did not spend enough time explaining things and discussing problems with patients.

So, although some preferred the level of anonymity and confidentiality that specialist services could offer, these negative experiences had led many to only use their GP when they wanted help or advice on sexual health. This was particularly so where GPs had built up a trusting relationship with their patients and were more easily accessible. Indeed, despite the apparently convenient location of GUM clinics in Camden and Islington, physical access to specialist services was also an issue, partly because GUM clinics were perceived to be in places that people did not want to go to. There was also felt to be a need for more outreach work and a wide distribution of free condoms.

#### **5.4.2 Ethnicity, culture and safer sex**

##### **Perceptions of safer-sex**

The study confirmed that safer sex is an everyday term with which men and women in the studied communities were familiar. It is often used interchangeably with condom use, however is also viewed as: being careful; protecting against pregnancy or disease; staying in control; and stability. These broader dimensions to understanding of safer sex are encouraging. They suggest that individuals and communities have assimilated and interpreted the safer-sex message in a variety of ways. Rather than focusing solely on condom use, the data suggest a number of ways in which promoting the concept of safer sex to these communities could be exploited. This may be particularly relevant for the African and Asian communities studied, where concepts of staying in control and stability of relationships were particularly important.

### **What is risky?**

The data suggest that sexual risk is perceived in terms of having sex with more than one partner or unsafe partners. Those who do not perceive themselves to be at risk, through stability of relationships, selectivity of partners, and self-control in sexual lifestyles, do not therefore regard condom use as necessary. Monogamy is perceived to remove the risk of disease. Condom use can be regarded as inappropriate within marriage, and the suggestion that either partner may be infected or unfaithful was raised. Other interpretations of risk were related to specific sexual practices. Western Jazz and sex without foreplay were mentioned as being risky due to their mechanical effects e.g. condom breakage, trauma to the genital area.

Once again, these interpretations provide broader contexts to explore issues of sexual risk with affected communities. Much of current sexual health promotion is geared towards promoting condom use and STI screening, and relatively few messages have focused on reducing the numbers of partners, nor in making condom use safer. This contrasts with gay men's sexual health promotion activities in which explicit campaigns have been developed around safer condom use and reducing sexual trauma. The data suggest that there may well be some need for discussion around these issues – particularly within the African community.

### **5.4.3 Condom use**

The study confirmed marked variations in condom awareness, access and utilisation across ethnic groups. As with perceptions of safer sex, the data showed marked variations in the contexts in which condom use were considered appropriate. Once again, gender, religious, and cultural beliefs influenced utilisation along with the nature of the sexual relationship and partner. It was interesting to note that in this study, regardless of gender or age, few believed that their current sexual lifestyles pose any risk of infection.

Older people rarely knew about methods of protection until some time after puberty and sexual activity. This was particularly true of the older groups under study (aged 35 years or over) who became sexually active before the emergence of HIV/AIDS and who were

therefore not exposed to many of the condom promotion messages of the mid-late 1980s. It also contrasts to the experiences of younger respondents who had been exposed to sex education in schools throughout the 1990s. They were more likely to be aware of and use condoms.

#### **5.4.4 Limitations of this study**

The study had a number of limitations. The *proposed* ethnic sub-group sample sizes were lower than that ideally required for full purposive selection but were limited by the resources available for a study of this kind. As such, purposive sampling was used to enable wider inferences to be drawn about the factors and influences that affect sexual behaviours and lifestyles and how and why these may differ between the communities involved. Purposive selection ensures that all the key constituencies within a population are covered within the sample. For a sample of this kind, where three communities are being studied, each study group would ideally have required a full purposive sample in its own right (i.e. between 30-35 people). The scale of such a study would be prohibitive in terms of the required budget.

The *achieved* sample (63 respondents) was somewhat lower than the 70 anticipated. The complex sample composition, combined with the sensitive nature of the study, made it difficult to find and recruit all the specified groups. In particular, problems were experienced in selecting: older Bangladeshi respondents, particularly women; Africans currently living with their partners (both men and women); and young Jamaicans (i.e. under 20). There were also some difficulties in gaining access to homosexual respondents most notably amongst the Asian samples.

The five community groups were selected in order to allow researchers to explore themes not only within particular ethnic groups but also across groups, to highlight differences and commonality of experience as ethnic minorities living in Britain. The study has shown that within certain groups e.g. Nigerians and Ugandans, religion and tribal affiliations assume greater importance than nationality and need to be taken into account in future inquiry.

The study was explorative and did not aim to cover particular areas in great depth. In



contrast, we deliberately aimed for the study to cover a wide range of topics. In so doing, some important areas could not be addressed with the required depth or vigour. However, it was intended that ExES would highlight areas for future research.

#### 5.4.5 Methodological developments and advances

Using survey techniques to investigate the sexual attitudes and lifestyles of ethnic minority communities presents two major challenges: identifying a representative sample of minority groups; and collecting accurate information from them on this sensitive subject. The research team incorporated established and innovative methodologies in undertaking this study based on the extensive experience gained through the British National Survey of Sexual Attitudes and Lifestyles (Natsal) 1990, a variety of health-related qualitative research projects and large-scale community surveys among ethnic minority communities. Box 14 (page 130) outlines some of the strategies utilised.

#### Box 14. Methodological techniques employed in the ExES study

Established techniques	Innovative techniques
<ul style="list-style-type: none"> <li>❖ Focused enumeration used to make the community screening more efficient</li> <li>❖ Recruitment undertaken by trained, experienced, older women</li> <li>❖ Tape recorded interviews</li> <li>❖ Ethnically matched interviewers</li> <li>❖ Respondents paid per interview</li> <li>❖ Non-English interviews were translated and transcribed by interviewers</li> <li>❖ Analysis using Framework technique</li> </ul>	<ul style="list-style-type: none"> <li>❖ Using focused enumeration in conjunction with purposive sampling</li> <li>❖ Translated project information sheets</li> <li>❖ Topic guide developed in consultation with local community groups</li> <li>❖ Involvement of ethnically matched interviewers in the transcription and creation of framework in preparation for analysis.</li> <li>❖ Linking qualitative and epidemiological research skills in the research team.</li> </ul>

The use of ethnically-matched interviewers was highly acceptable and considered appropriate by those interviewed. This counters previous assumptions that respondents from ethnic minority communities would be reluctant to discuss intimate subjects with individuals from similar backgrounds. The factors found to influence acceptability included the interviewers professional approach, confidence and familiarity with the research. Gender-matching was also important, particularly so among the Asian and African respondents. Jamaicans expressed no real preference in this regard. The benefits of improved response, understanding and acceptability should be measured against the costs of additional staff, translation and transcription. From our own experience, ethnic and gender-

matching would be highly recommended for future research in this area.

Involving communities in the research project was an important development in this study. Community groups were consulted in the development of the topic guide and methodology employed. The study was advertised in a number of health promotion bulletins and presented in local health promotion fora. The interviewers, drawn from the study communities, were trained extensively and involved in the initial phase of the data analysis - thereby increasing their involvement and ownership of the process and ensuring that the data remained grounded.

ExES provided useful information for sexual health promotion and GUM practitioners at a time when such resources were scarce. The results of this investigation have been used to inform:

- **Methodology:** Design other quantitative studies of sexual attitudes and lifestyles: the other two studies presented in this thesis (MAYISHA and Natsal 2000 ethnic minority boost) relied on data derived from this study.
- **Health Promotion:** Data from the study were used to inform the development of sexual health promotion materials for Black and ethnic minority communities by Camden and Islington Health promotion.
- **Health Policy:** Results from this work were used to inform the development of various local and national strategic initiatives including the National Sexual Health Strategy, the African HIV Prevention Framework.

#### **5.4.6 Conclusions**

The ExES study demonstrated the role and utility of qualitative research in understanding some of the contextual influences on the relationship between ethnicity and sexual health. This community-based study demonstrated clear differences between ethnic minority communities in their awareness of STIs and HIV, utilisation of local sexual health services, and perceptions of sexual risk behaviour.

**Table 5-1: ExES Study: Socio-demographic characteristics of the achieved sample**

Socio-demographic characteristics	African			South Asian			African-Caribbean Jamaican
	Nigerian	Ugandan	Total	Indian	Bangladeshi	Total	
Gender:							
Male	6	6	12	5	4	9	10
Female	6	5	11	6	6	12	9
Age:							
16-24	4	4	8	4	4	8	5
25-34	4	3	7	3	2	5	9
35-45	4	4	8	4	3	7	5
Partnership status:							
Lives with spouse/partner	3	3	6	6	6	12	10
Has partner - lives elsewhere	4	1	5	2	1	3	1
No partner							
Not known	5	7	12	3	3	6	7
	-	-	-	-	-	-	1
Children:							
Children still at home	3	6	9	5	7	12	10
Children live elsewhere	2	2	4	-	-	-	-
No children	7	3	10	6	3	9	9
Tenure:							
Owner occupier	3	-	3	3	1	4	1
Tenant	4	10	14	3	3	6	11
Lives with parents	2	-	2	5	3	8	1
Not known	3	1	4	0	3	3	6
Employment activity							
In employment (full or part time)	7	5	12	5	3	8	9
Unemployed	1	2	3	1	1	2	6
Full time education (and work)	4	4	8	4	1	5	-
Looking after home/family	-	-	-	1	5	6	2
Not known	-	-	-	-	-	-	2
Base:							
Interviewed Sample	12	11	23	11	10	21	19

**Table 5-2. ExES study participants: Distribution by country of migration and migration history**

Country of origin/migration	African			South Asian			African-Caribbean
	Nigerian	Ugandan	Total	Indian	Bangladeshi	Total	Jamaican
Country of origin:							
United Kingdom	6	-	6	4	3	7	13
Nigeria	6	-	6	-	-	-	-
Uganda	-	10	10	-	-	-	-
India	-	-	-	4	-	4	-
Bangladeshi	-	-	-	-	7	7	-
Jamaica	-	-	-	-	-	-	-
Other country	-	1	1	3	-	3	6
Country of 2° schooling:							
United Kingdom only	5	2	7	6	5	11	13
Other country of origin	7	7	14	4	1	5	5
United Kingdom and other country	-	2	2	1	1	2	1
No secondary education	-	-	-	-	3	3	3
Length of time in UK							
Less than 5 years	2	2	4	-	1	1	2
5 up to 10 years	2	6	8	2	1	3	2
10 years up to 20	3	2	5	2	4	6	1
20 years or more	2	1	3	3	2	5	8
Lived in United Kingdom since born	3	-	3	4	2	6	6
Residence in the UK							
United Kingdom born	3	-	3	4	3	7	12
Since childhood	1	3	4	2	3	5	1
Long term adult reside.	5	2	7	3	3	6	3
Recent immigrants	3	5	8	2	1	3	3
Last visit to home country/country of parents' origin							
Within 2 years	3	2	5	3	2	5	1
2 up to 5 years	1	3	4	1	2	3	2
5 years or more	2	3	5	2	5	7	7
Unclear when	5	1	6	2	-	2	6
Never	1	2	3	3	1	4	3
Base: Interview sample	12	11	23	11	10	21	19

**Table 5-3. Distribution of participants by sexuality**

Ethnic group	Heterosexual		Homosexual		Bisexual
	F	M	F	M	F
Africans	10	11	2	-	-
Jamaican	9	7	1	1	1
South Asians	9	12	-	-	-
TOTAL	28	30	3	1	1

## Chapter 6.

# Sexual attitudes and lifestyles of London's migrant African communities

### CHAPTER SUMMARY

**Background:** Migrant African communities bear a disproportionate burden of the United Kingdom heterosexual HIV/AIDS epidemic, with over 2000 new diagnoses occurring in this group annually. Despite this, relatively little is known about the distribution of high-risk sexual risk behaviour, or the uptake of HIV prevention interventions within these communities.

**Methods:** MAYISHA was a participatory research project involving a cross-sectional social venue survey of sexual attitudes and lifestyles among migrant African communities in London. Trained, ethnically matched interviewers undertook recruitment in pre-identified venues.

**Results:** 752 respondents agreed to participate in the survey and 748 returned valid questionnaires. Median ages were 31 and 27 for men and women, respectively. Median length of residence in the United Kingdom was 6 years. 40% of men and women reported having a new sexual partner in the past year. Condom use at last intercourse was reported by 46% of men and 43% of women. 40% of respondents had visited their countries of origin in the past 5 years. While there, men were significantly more likely than women to report having a new sexual partner. 35% of men and 18% of women reported having a previous STI, with 30% of men and 34% of women reporting ever having had an HIV test.

**Interpretation:** MAYISHA was the first and largest study of sexual attitudes and lifestyles undertaken among migrant African communities in Britain. The study highlighted high prevalence of high-risk sexual behaviours, reported STIs and HIV testing with significant heterogeneity across national sub-groups.

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**Candidate's contribution to this work:** I was a co-investigator in this study and was involved in all stages of its conceptualisation, design, implementation, data analysis and write-up. I took the lead in developing the methodology for the participatory approach employed in the study. I undertook all analyses presented in this chapter.

## 6.1 BACKGROUND

After gay and bisexual men, African communities in the United Kingdom, particularly those from sub-Saharan Africa, are the second largest social group affected by HIV/AIDS (Del Amo *et al.* 1996; McMunn, Mwanje, & Pozniak 1997). By the end of March 2000, diagnoses of HIV infections acquired in Africa formed 64% of all reported heterosexually acquired infections and 84% of those acquired abroad. Of the 18,082 individuals who sought care for their HIV disease, 22% were Black African (The UK Collaborative Group for HIV and STI Surveillance 2004). The overwhelming majority (83%, 3241/ 3902) of HIV-positive Black Africans were resident in the London region, and 77% (3024/3902) had acquired their infection through sex between men and women.

Previous studies have focused on clinical care and disease progression within Black African communities (Del Amo *et al.* 1996; Del Amo, Goh, & Forster 1996; Kilmarx *et al.* 1997; Low *et al.* 1996) and have highlighted differences in clinical presentation and opportunistic infections between Black Africans and members of other ethnic groups (Del Amo *et al.* 1996; Del Amo *et al.* 1998; Del Amo, Goh, & Forster 1996; Low, Paine, Clark, Mahalingam, & Pozniak 1996). However, there remains no evidence to suggest that Britain's African communities have a worsened clinical disease spectrum or prognosis (Del Amo *et al.* 1998), nor is there any evidence that Africans in contact with treatment services are less likely to avail themselves of antiretroviral therapy.

Despite these positive clinical outcomes, relatively few studies have attempted to understand the socio-cultural or psychological factors, which place African communities at increased risk, or to identify areas for intervention. Social stigma related to HIV/AIDS, discrimination and fear of recrimination within Britain's African community undoubtedly contribute to the poor uptake of primary and secondary prevention initiatives including HIV testing, treatment and care (Erwin & Peters 1999). If rapid transmission of HIV in Africa is rooted in poverty, unequal gender relations and regionally specific sexual behaviours and practices, to what degree do these phenomena persist among African migrants in Britain? Do the social attitudes that incline men towards multiple partners and use of commercial sexual services, persist in the United Kingdom? If not, what are the causes and what is the

nature and rate of behavioural change? The degree to which these factors may be influencing the evolution and transmission of HIV and other STIs within the Black African community today is the subject of some concern.

### **6.1.1 Chapter objectives**

At the time of commencing this study, there had been no large-scale quantitative investigations of the sexual attitudes and lifestyles of Britain's Black African communities. This chapter is presented to demonstrate the methodology and outcomes of a participatory research study that was established to specifically explore this issue.

Specific objectives of this chapter are to:

- 1) Outline the methodology and outcomes of the MAYISHA study;
- 2) Explore the distribution of high-risk sexual behaviours and adverse sexual health outcomes within and across national sub-groups of Black Africans;
- 3) Explore the associations between gender, nationality and migration history and adverse sexual health outcomes within this community.

## **6.2 METHODS**

### **6.2.1 Study setting**

The study was developed and implemented in the North London boroughs of Camden and Islington. With a local population of over 500,000 residents, Camden and Islington forms one of London's most ethnically diverse boroughs and is home to large, dynamic populations of established and new minority communities (including asylum seekers and refugees). Camden and Islington's Black and ethnic minority population accounts for 21.3% of the total district population of whom 4.5% are Africans (see Box 5, page 81).

Characteristic of migrant African communities in the United Kingdom, those in Camden and Islington tend to be young, single, highly educated with high levels of unemployment and poor housing. Camden and Islington Health Authority (now Primary Care Trust) was



unique in having developed and implemented a proactive HIV prevention strategy in the early 1990s, (Camden and Islington Health Authority 1997b) within which sat a separate African HIV Prevention Strategy (Camden and Islington Health Authority 1997a). The Camden and Islington Health Promotion Team had, over time, developed close links with local African community-based organisations with full engagement in service, research and development activities. This established network provided a unique foundation for the development and implementation of this study.

### **6.2.2 Study design**

The participatory research project, called MAYISHA (derived from the Kiswahili term for lifestyles) was a community-based survey of sexual attitudes and lifestyles of five migrant African communities in Camden and Islington – Congolese, Kenyan, Zambian, Zimbabwean and Ugandan. MAYISHA was conducted jointly by researchers from the Camden and Islington Health Authority, the Royal Free and University College Medical School in association with six local African community-based organisations (African Advocacy Foundation, Forward in Faith Ministries Community Awareness Project, Islington Zaire Refugee Group, London Ecumenical AIDS Trust, Pamodzi, The Zimbabwe HIV Forum). The study was funded by a grant of £56,000 from AVERT, a leading United Kingdom AIDS Education and Medical Research charity in November 1997.

Overall project objectives were to:

- 1) Determine the feasibility of establishing collaborative research partnerships between local researchers, health-care providers and African community-based organisations (CBO).
- 2) Use rapid assessment techniques to identify and describe venues in Camden and Islington where the target African communities socialised, in particular, venues which would facilitate on-site recruitment of respondents.
- 3) Adopt a participatory approach, through the active involvement of target communities, in the research process, to undertake a community-based survey of sexual attitudes and lifestyles within these communities.



### **Study and sample population**

The sample population was migrant Black Africans in London. The study population were members of the Ugandan, Congolese, Kenyan, Zambian and Zimbabwean communities (first or second generation), aged 16 years and over, resident or socialising in Camden and Islington. These communities had been identified in the district's HIV prevention strategy (Camden and Islington Health Authority 1997a; Camden and Islington Health Authority 1997b) as being in need of intensive HIV health promotion and research by virtue of their high HIV prevalence, and poor engagement with local HIV prevention and treatment services. They were also among the most populous migrant Black African communities resident in the district.

### **Study management and community involvement**

Appendix 8 contains all relevant MAYISHA study materials, including a full protocol. A participatory model was developed in which a *core research team* (comprised of academics and community representatives) worked with local African community-based organisations (CBOs) to target and recruit respondents to the cross-sectional study. This core research team would lead the overall study design, development and implementation. Members and roles of the core research team are briefly described below.

The principal *academic investigators* included myself (epidemiologist), along with two clinical psychologists with experience in HIV/AIDS-related behavioural research. Much of the formative developmental work for the study was initiated by this team in consultation with local and national stakeholders in African HIV prevention and research. As technical experts, the academic investigators guided the training of key workers, development of study protocols, data analysis and report-writing. A part-time *research assistant* (female, Black African ethnicity of Zimbabwean origin) was recruited to co-ordinate the study and joined the core team.

Finally, CBOs working with the five target communities within the District were approached and invited to nominate representatives (*key workers*) to join the core research team. Key workers were eligible for inclusion if they: a) worked with a local (Camden and

Islington based) CBO; b) were nominated by a local CBO; c) had a good working knowledge of local community structures; d) had some previous research experience. Strict eligibility criteria were agreed with a view to nominating at least two key workers (one male and one female) for each country group. After a one-month selection period, involving nomination and election by community representatives, a cadre of 10 key workers was finally co-opted to work on the project. Employed by local CBOs, the key workers were seconded to the MAYISHA research team for the duration of the project. They thus provided a formal link between the research study and the community, providing feedback to local CBOs and community members; advice on developing culturally competent study materials, research and dissemination strategies.

Following selection, all key workers were invited to participate in six-weekly research training half-days. The training programme aimed to ensure that all key workers were brought 'up-to-speed' with research terminology; the range of research techniques used; and the ethical and pragmatic considerations involved in undertaking field research. The training was co-ordinated by the author and involved a series of interactive research workshops delivered by members of the Department of STDs, Mortimer Market Centre. The sessions included: quantitative research; qualitative research; designing questionnaires; evidence-based medicine; models and theory of behavioural change; and studying sexual behaviour. On completion of the training programme, key workers were involved in the development of the study questionnaires, developing the methodology of the cross sectional study; study recruitment; and review and dissemination of research findings.

### **6.2.3 The MAYISHA social and commercial venue survey**

The overall aim of the MAYISHA cross-sectional study was to carry out a survey of sexual attitudes and lifestyles in a community-based sample of 500 men and women from the five target African communities in London. The data generated would be used to:

- 1) Provide an understanding of the patterns of sexual behaviour among migrant communities in inner London
- 2) Provide data for sexual health promotion with these communities
- 3) Provide baseline behavioural data for future behavioural surveillance within migrant

African communities.

### **MAYISHA rapid assessment exercise (RAE)**

Prior to commencing development work on the cross-sectional study, a rapid assessment exercise (RAE) was undertaken by the study investigators in order to obtain information on the distribution (residential and social) of target communities within the district; to assess the mobility of target communities (within, between and outside London boroughs); to publicise the planned study; and to receive input from local CBOs regarding the feasibility and acceptability of the participatory approach. (Chinouya, Fenton, & Davidson 1999)

Rapid assessment is the utilisation of any data, which will give insight into the nature of the behaviour being studied, or an assessment of the structure and services which exist in order to assess a particular health problem (UNDCP, 1996). It uses both quantitative and qualitative data, secondary data, directly and purposefully collected data, focus groups and key informants, as well as direct interviews with clients in order to assess the nature, extent and patterns associated with the behaviour being studied. The methodology is characterised by the range of data being used, the speed with which it is undertaken, and its cost-effectiveness.

Various approaches were adopted in the MAYISHA RAE (see Box 15). Key informants were used to gather as wide a range of views and insights as possible, and focus groups were used to explore specific situations or trends. Finally, data were collected directly from the clients where possible, either through institutions or through snowball sampling.

### **Box 15. Methodologies employed in the MAYISHA rapid assessment exercise**

Methodology	Sample population (n)	Rationale
Key informant interviews	<ul style="list-style-type: none"> <li>❖ African health promotion workers</li> <li>❖ Heads of local CBOs</li> </ul>	<ul style="list-style-type: none"> <li>❖ To raise the profile of MAYISHA</li> <li>❖ To elicit collaboration on the study</li> <li>❖ To identify areas known to respondents as being key areas within the community</li> </ul>
Structured questionnaire	<ul style="list-style-type: none"> <li>❖ African health promotion workers</li> <li>❖ Heads of local CBOs</li> <li>❖ Venue owners</li> </ul>	<ul style="list-style-type: none"> <li>❖ To quantitatively document the nature, range of venues and the target communities and opportunities</li> </ul>
Snowballing	<ul style="list-style-type: none"> <li>❖ Venue owners</li> <li>❖ Venue users</li> </ul>	<ul style="list-style-type: none"> <li>❖ To identify other social venues used by the target community</li> </ul>

Methodology	Sample population (n)	Rationale
Participant observation	❖ All identified social venues	❖ Confirm utilisation by one or more of target communities ❖ To identify 'dynamics' within the venue with respect to gender, alcohol, opportunities for sexual health promotion and research
Community consultation	❖ Open meetings held with members of the target African communities	❖ To update and inform communities about MAYISHA's progress; to obtain information on range of venues identified; to identify other potential venues for inclusion
Participatory methods including mapping of venues	❖ Key workers	❖ To validate findings of the rapid assessment exercise and to generate further ideas/ topics for exploration

The detailed findings of the RAE have been published elsewhere<sup>207</sup>, but findings relevant to the cross-sectional survey are summarised briefly here. The MAYISHA RAE identified a range of venues (formal and informal) where the target African communities could be best located in Camden and Islington.

Formal venues included registered organisations; businesses; or self-help groups including churches, universities, embassies and restaurants. Informal venues included baby showers, hair salons, informal groups in garages and car-washes, some night-clubs and bars, kitchen parties, initiation ceremonies, and annual community events (e.g. national beauty contests, independence celebrations).

Occasionally, the distinction between formal and informal structures was blurred, as events fell between categories e.g. church members worshipping in a members' house, self-help group meeting in an unregistered bar, etc. For each venue identified, the researcher documented its address, opening times, manager's details, nature and range of the African community patrons. Venues were also rated with respect to the appropriateness, feasibility and acceptability of venue-based recruitment.

### Justification of sample size

Taking into consideration the local demography and size of the various target populations, we aimed to survey between 100 and 150 individuals (equally split between genders) from each community. This sample size would enable us to obtain sufficient data from the surveyed communities and allow cross-community comparisons.

### **Questionnaire design and development**

The MAYISHA core research team developed two study questionnaires. A 21-item questionnaire for distribution in identified social venues (see Appendix 7), and a more detailed questionnaire (containing over 70 items) for distribution outside of social venues. Both questionnaires covered similar topic areas including: demographic characteristics, migration history, use of sexual health services, sexual behaviour, use of vaginal herbs, travelling to countries of origin, sources of and attitudes to sexual health promotion, and individual and peer group norms and attitudes to various sexual practices and relationships.

The longer questionnaire permitted more in-depth exploration of these issues and included additional questions on reproductive health. The questions for inclusion were largely based on those used in previous studies (Johnson, Wadsworth, Wellings, & Field 1994; Nardone, Mercey, & Johnson 1997), although a number of new questions, specifically relevant to planning and delivering sexual health promotion with African communities, were developed by the research team. Both questionnaires were translated and available in French. The longer questionnaire was piloted with a randomly selected sub-group of 70 venue survey respondents, however the results are not presented in this work.

### **Fieldwork procedures**

Key worker pairs identified between five and ten volunteers from their own communities to assist in the survey recruitment. These ‘country teams’ were directly accountable to the MAYISHA project co-ordinator. All recruiters were required to participate in a one-day, interactive, training programme before being allowed to recruit in the community. An operational manual for community recruitment was prepared by the author and formed the basis for the training session.

In total, 27 trained, ethnically matched interviewers undertook recruitment to the cross-sectional survey (remunerated at £5 per hour). The majority of the interviewers were female (71%) and CBO volunteers.

A sampling frame, collating the key social and commercial venues identified in the rapid assessment exercise, was prepared by the study co-ordinator and used to identify appropriate

sites for targeting the community recruitment.

Study recruitment took place over a 5-month period in the pre-selected venues, once venue owners' had provided permission. Recruiters were asked to target each venue at least once during the recruitment period. At each venue, recruiters approached patrons aged 16 years and over, starting from one corner of the room, until all had been invited to participate in the study. Recruiters introduced themselves, the objectives of the study, reassured patrons about confidentiality and obtained verbal informed consent before inviting participants to complete the short, 21-item questionnaire. On completion, respondents were asked to seal the questionnaire in an envelope before placing it in a covered, opaque box.

Recruiters were asked to record details of the total numbers of contacts made in venues, and basic information on non-participants (including gender and reasons for non-participation) using a short questionnaire distribution record (SQDR). Information on the date and site of recruitment was collected on each questionnaire.

### Quality control

The MAYISHA project coordinator was responsible for monitoring the study progress and supporting key workers and country teams during the recruitment phase. As the recruitment was being undertaken entirely by the local communities, strict quality control measures (summarised in Box 16) were put in place in order to minimise systematic or random errors in data collection.

#### Box 16. Quality control systems implemented during MAYISHA

Risk	Intervention
Non-uniform recruitment procedures	<ul style="list-style-type: none"> <li>❖ Uniform training of all key and sessional workers</li> <li>❖ Observation by MAYISHA co-ordinator</li> <li>❖ Joint venue recruitment alongside MAYISHA co-ordinator</li> </ul>
Response rates	<ul style="list-style-type: none"> <li>❖ All sessional workers required to complete questionnaire distribution records (QDR) in each venue attended which monitored time spent; numbers approached and numbers of productive interviews.</li> </ul>
Recruitment restricted only to productive or single site(s)	<ul style="list-style-type: none"> <li>❖ Ongoing visual review of QDRs by MAYISHA co-ordinator</li> </ul>
Recruitment in non-target sites	<ul style="list-style-type: none"> <li>❖ Pre-agreed venue sampling frame provided to all country-teams</li> </ul>

Risk	Intervention
	❖ Authority for extra-venue sampling to be provided by the key worker in consultation with the MAYISHA co-ordinator
Submission of false claims/falsified questionnaires	❖ All claims submitted to key workers initially for verification. ❖ All questionnaires sent directly to MAYISHA co-ordinator. Visual review of questionnaires returned from each sessional worker
	❖ Statistical review of obtained questionnaires for homogeneity

### 6.2.4 Data cleaning and analysis

Data from the short questionnaire were double-entered and validated by an independent data management company (ABACUS). All data were subsequently received as an ASCII file and imported into Microsoft Excel and STATA for analysis. Data analysis was undertaken by the author and by a statistician (Dr A. Copas) based at the Mortimer Market Centre.

To compare groups of study participants e.g. men and women, standard techniques were used. Specifically the Chi-squared test was used to compare groups with regard to categorical factors, and the Mann-Whitney test used for continuous factors e.g. age. The unadjusted odds ratio (OR) was initially used to examine the nature of association between various explanatory factors and various outcomes of interest e.g. HIV testing. As a further analysis, adjusted ORs together with confidence intervals were calculated using logistic regression to examine the independent associations between behavioural factors found significant in univariate analyses with outcomes of interest, after adjusting for key demographic variables. Focusing the analysis of adjusted ORs in this way resulted in a scientifically conservative approach, in that an association between a behavioural factor and an outcome is only claimed when it could not be explained away in terms of demographic confounding factors. The results of the social and commercial venue survey are outlined in Section 6.3 below.

### Ethics

Ethical approval was obtained from the Camden and Islington Community Health Services NHS Trust Ethics Committee.

## 6.3 RESULTS

### 6.3.1 Study response

A total of 1000 questionnaires were distributed in the social venues. 752 respondents agreed to participate in the study and returned a questionnaire. Questionnaires from four respondents were poorly completed and excluded leaving 748 participants (396 men and 352 women) for further analyses. Data on location of recruitment was obtained for 609 respondents.

The highly mobile nature of the study population was evident when examining respondents' areas of residence. Although recruitment was undertaken almost entirely within Camden and Islington, only a quarter of respondents lived in the district. Thirty-five percent lived in other north London boroughs and 25% were resident in south London. Thirteen percent of respondents were resident outside of London.

#### Box 17: Postcode of residence of study respondents (n=609)

Postcode	Number	Percent
Any in Camden & Islington	180	26%
E1 - E29	117	17%
N2 - N22	64	9%
NW4 - NW12	36	5%
SE1 - SE28	146	21%
SW1 - SW28	37	5%
W2 - W16	29	4%
Outside London	86	13%

### 6.3.2 Demographic characteristics

The key demographic characteristics of the achieved sample are summarised in Table 6-1. Men were significantly older than women, median ages 31 (range 16-70) and 27 (16-68) years respectively. Congolese respondents formed the largest contingent, accounting for 27% of male and 20% of female recruits. All other target groups had roughly the same number of male and female participants (at least 60 males and 60 females) with the exception of the Zambian group, which had relatively fewer women.

The majority (>90%) of respondents were born in Africa, and over 85% of men and 81% of



women migrated to the United Kingdom after adolescence. Although, the median length of residence in the United Kingdom was six years for men and women, significant differences were observed across national groups ( $p < 0.005$ , Table 6-3). Over 50% of Kenyan and Congolese were resident in the United Kingdom for less than five years.

Respondents were highly educated yet had high levels of unemployment. Nearly 75% of men and 60% of women had been educated to University/ College or professional training. Despite this only 50% (196/390) of men and 41% (142/348) of women were currently in full-time employment. Statistically significant gender differences in marital status ( $p = 0.003$ ) were observed with higher proportions of men being currently married than women (40% versus 28% respectively); and more women being widowed/separated or divorced than men (7.7% versus 4.9%).

Overall, 29% of men and 21% of women reported ever having been diagnosed with an STI (Table 6-1) with a cumulative incidence of 5% within the past year, and 15% in the past five years for both genders. Reported STIs varied significantly ( $\chi^2 29.9$ ,  $p < 0.001$ ) across national groups among men with over 40% of Kenyan men reporting a previous STI diagnosis compared with less than 20% of Zimbabweans.

### **6.3.3 High-risk sexual behaviours**

Table 6-2 shows the distribution of high-risk sexual behaviours by gender across the achieved sample. Just over 40% of men and women reported having had a new sexual partner in the past year ( $p = 0.45$ ). Condom use at last intercourse was reported by 46% of men and 43% of women ( $p = 0.40$ ). The reasons for using condoms at last intercourse differed significantly by gender ( $p = 0.006$ ) with men being more likely to report using condoms in order to prevent STI/HIV infection than women (24.4% versus 11.5%), and women being more likely to report using condoms for preventing 'both pregnancy and HIV' than men (69.2% versus 51.3%).

Respondents were asked about travelling to their countries of origin and the likelihood of acquiring new sexual partners whilst abroad. 42.9% of men and 46.1% of women had visited their countries of origin within the past five years (Table 6-2). Whilst there, men

were significantly more likely than women to report having a new sexual partner (34.8% versus 17.8%,  $p = 0.001$ ).

#### **6.3.4 Migration history and high-risk behaviours**

Table 6-3 shows the distribution of high-risk sexual behaviours by gender and length of residence in the United Kingdom. Significant differences were observed in the demographic characteristics and high-risk behaviours of more recent arrivals (i.e. those resident in the United Kingdom for less than five years) compared with those who had been a United Kingdom resident for longer. Among both men and women, recent migrants (those resident in the United Kingdom for less than five years) were significantly younger ( $p = 0.0001$ ) and more likely to be of Congolese and Kenyan origin ( $p < 0.005$ ), compared to those resident for longer periods. Among women, apart from the demographic differences mentioned above, there were no significant behavioural differences observed by length of residence in the United Kingdom.

In contrast, significant differences were observed between recent and longer-term male migrants with respect to marital status, prior STI history, reported sexual partnerships and attitudes to condom use. Men resident in the United Kingdom for less than five years were more likely to be single and less likely to be married than those who had been resident for longer periods ( $p = 0.03$ , Table 6-3). They also reported a higher median number of new partners in the past year than longer-term residents (median 2 (range 0-14) versus 1(0-19),  $p = 0.03$ ) respectively.

Men who were resident in the United Kingdom for less than five years were significantly more likely to report being diagnosed with an STI within the past year (9% versus 4%) and 1-5 year periods (13% versus 8%) than longer term residents ( $p=0.04$ , Table 6-3). They were also more likely to report negative peer group norms about using condoms with new partners (as assessed by the question: “*Most people who are important to me do not think I should use condoms with new sexual partners*”) compared to longer-term residents (39% versus 26%,  $p = 0.02$ ).

#### **6.3.5 Travel and high-risk sexual behaviours**

Table 6-4 shows the factors associated with the acquisition of a new sexual partner whilst abroad. As mentioned previously, 40% of men and 21% of women reported having a new sexual partner whilst visiting their country of origin in the past five years (Table 6-2). In univariate analysis (Table 6-4), this behaviour was significantly associated with being male compared to female (OR 2.53; 95% confidence interval 1.47-4.35), being widowed/separated/ divorced compared with married (OR 4.27, 1.61-11.3), having ever had an STI (OR 6.21, 3.43-11.30), reporting more than five sexual partners in the past year compared to not (OR 8.62, 2.72-27.30), using condoms for STI prevention compared with pregnancy prevention (OR 10.4, 1.93-56.10), and negative peer group norms regarding condom use with new sexual partners (OR 2.77, 1.46-5.28). No significant differences were observed across national groups.

A multivariate model was created to explore those factors independently associated with the acquisition of new sexual partners whilst travelling home to individuals' country of origin. After controlling for significant demographic factors, previous diagnosis with an STI (adjusted OR 4.06, 95% confidence interval 1.60-10.3), and use of condoms at last intercourse (e.g. for prevention of STDs/HIV compared to pregnancy adj. OR 11.8, 95%CI 1.29-109) remained significantly associated with acquiring new sexual partners abroad. Reporting more than five sexual partners in the past year, and negative peer group norms about condom use remained weakly associated after adjustment.

### **6.3.6 HIV testing and use of STD services**

As shown in Table 6-1, the lifetime cumulative incidence of HIV testing was 34% of men and 30% of women. In addition, 13% of men and 9% of women reported having had an HIV test in the past year.

Table 6-5 shows the factors associated with the uptake of HIV testing among African men and women. Among women, HIV testing was significantly associated with increasing age and previous diagnosis with an STI compared to none (OR 2.11, 95%CI 1.22-3.64).

Among men, HIV testing was significantly associated with a wider range of factors including increasing age, Ugandan (OR 2.84, 95%CI 1.42-5.68) and Zambian (OR 2.29,

95%CI 1.13-4.64) ethnicity compared with Congolese, University (OR 2.90, 95%CI 1.59-5.29) and Professional (OR 3.09, 95%CI 1.52-6.29) compared with secondary school or lower education, previous diagnosis with an STI compared with none (OR 2.51, 95%CI 1.55-4.06), and perceiving oneself to be at some or high-risk of catching HIV/AIDS compared to not (OR 2.35, 95%CI 1.47-3.76).

Multivariate models were constructed to explore the factors independently associated with HIV testing, adjusting for significant demographic variables from the univariate analyses. Among men, controlling for age, nationality and prior STI diagnosis, the only factors remaining independently associated with having an HIV test were being previously diagnosed with an STI (adjusted OR 2.96, 95% CI 1.63-5.38) and self-perceived risk of catching HIV/AIDS (adjusted OR 2.28, 95% CI 1.34-3.90). Among women, after controlling for age, previous diagnosis of an STI (adjusted OR 2.03, 95% CI 1.06-3.88) remained the only factors independently associated with HIV testing.

### **6.3.7 Exploring the influence of nationality, migration and socialisation on sexual health outcomes**

Analyses of key demographic and behavioural variables were undertaken to explore heterogeneity across the five country groups. Table 6-6 summarises those variables that differed significantly across ethnic groups in univariate analysis. Significant heterogeneity across national groups were observed for a variety of factors including length of residence in the United Kingdom, marital status, educational achievement, employment, new sex partner in past year, condom utilisation, peer group norms related to condom use, and perceived risk of catching HIV/AIDS.

Some of the key findings include:

- **Length of residency:** Over 70% of Zambian and Ugandan men and women had been resident within United Kingdom for more than five years. Other groups for example the Congolese and Kenyans were more recently arrived, with just over 50% of Kenyan and Congolese women and men resident in the United Kingdom for less than five years. Zimbabweans were the most recently arrived community with just under 50% being resident in the United Kingdom for this period.

- **Socio-economic status:** Ugandan, Zambian and Zimbabwean men (>70%) and women (>60%) were more likely to have university/professional education than Kenyan and Congolese. Higher proportions (50-60%) of Zambian and Zimbabwean men and women were in full-time employment compared with 20-40% of other nationalities. Employment was lowest in Congolese women (20%).
- **High-risk behaviours:** Kenyan men and women (>40%) were most likely to report previous STI; Zimbabweans least likely (<20%). Kenyans reported higher mean numbers of partners compared with other communities. Kenyan men (46%) and women (25%) were more likely to report a new sexual partner abroad than all other groups.
- **HIV risk perception and uptake of HIV testing:** Zambian women were least likely to perceive themselves to be at risk of catching HIV/AIDS (37%) compared with over 50% of all other nationals. Kenyan (26%) and Congolese (21%) men were less likely to HIV test than other nationalities (>40%). Ugandan (47%) and Zambian (44%) women were more likely to HIV test than others.

## 6.4 DISCUSSION

MAYISHA remains the first and largest study of sexual attitudes and lifestyles ever undertaken among Britain's Black African community. The data suggest the existence of substantial variability in the demographic characteristics, behavioural risk profiles and sexual health outcomes of Black Africans by gender, nationality and migration history. The study also illustrates some of the limitations of using broad ethnicity categories as a variable in sexual behaviour research. The study's findings have numerous implications for the development of targeted sexual health promotion interventions with migrant African communities.

### Africans in Britain: Migration

The MAYISHA data also show the variability in the length of United Kingdom residency across the national sub-groups. Indeed, even among the relatively recently arrived Black

African community, well-established groups, such as the Zambians and Ugandans are found alongside more recent migrants such as those from Congo and Kenya. The data therefore suggest the continued in-migration from sub-Saharan African countries, and highlight the evolving nature of this process.

Temporal changes in the nationalities of migrant African communities reflect an interplay between push and pull factors. Pull factors, such as good employment opportunities, high wages, political stability and social security systems have been fairly constant features of Western European life over the past three decades and therefore provided incentives for migrants to arrive. Push factors, for example population growth, unemployment, poverty, war, famine, political unrest operated to varying extents in the sending countries during this period. Thus, political unrest in Uganda in the early 1980s resulted in mass emigration to the United Kingdom and a consequent overrepresentation of Ugandans in early HIV/AIDS surveillance reports. More recent unrest in Zimbabwe, coupled with proactive employment drives for health and social care professionals have seen substantial increases in Zimbabwean in-migration and dramatic increases in new HIV diagnoses among these groups. Migration is also self-propelling in that current migration will result in ongoing future migration independently from other push or pull factors (since those who remain have an incentive to migrate also).

The data presented also suggest that migration history is particularly relevant in understanding high-risk behaviours within the African community, particularly among African men. Migration favours those who are young, healthy, highly educated and economically productive. This is clearly evidenced by the high level of educational attainment among Africans observed in this and other demographic and migration studies. Migrants are also more likely to be male, many of whom have left primary partners or families in the country of origin.

The higher behavioural risk profile of African men resident in the UK for five years or less (recently arrived) compared to those resident in the United Kingdom for longer periods is of concern. Although confounded by age and marital status, the data suggest that recently arrived migrants are likely to have particular sexual health needs. The higher rates of partner

acquisition and higher proportion of recent STI diagnoses among recently arrived males in particular present unique opportunities for STI acquisition, and onward HIV transmission, within this group. Further qualitative work is required to explore reasons why risk behaviours may be higher among those who have recently arrived.

### **Heterogeneity across gender and nationality**

Significant gender differences were observed in the demographic characteristics, socio-economic status and high-risk sexual behaviours, both across the sample and within ethnic sub-groups. As anticipated, women recruited in this social venue survey were generally younger, single, and less likely to be in full-time employment than the men. This may reflect the natural patterns of gender distribution and mixing in social venues, which are more likely to be frequented by older men and younger women (as older women are more likely to be sequestered due to child-bearing and rearing responsibilities). Significantly fewer women than men reported having had a previous STI diagnosis in MAYISHA.

MAYISHA showed that even within the Black African community, substantial variations also exist in the demographic and behavioural risk profile of different national groups. Such heterogeneity was observed in the qualitative study presented in Chapter 4, and reflects cultural traditions, migration history, degree of acculturation, and religious affiliation among other factors.

However, as shown in the multivariate models in Table 6-4 and Table 6-5, the impact of nationality varies according to the outcome of interest. Although nationality was associated with acquisition of new sexual partners whilst abroad and with HIV testing among men, these associations disappeared once age and gender had been adjusted for. This suggests that although culturally specific factors may contribute to ethnic variations in sexual health outcomes within African communities, the variations are largely explained by age-group and gender differences. This bodes well for those delivering HIV health promotion interventions with African communities who are concerned about the practicality of developing interventions to cover the range of African national groups residing in the district. Although an important facet of developing culturally competent interventions, nationality is not of itself a major determinant of sexual health need.

**Risk profiles among social venue recruits**

The data confirm that individuals using social and commercial venues have substantially higher risk profiles than those attending GUM clinics or those recruited from general population surveys. The proportion of women reporting a previous STI in MAYISHA (20.5%) was somewhat higher than women in the GUM clinic study (22%, see Table 4-5) and substantially higher than that found in the general population studies (Fenton *et al.* 2001). In the second National Survey of Sexual Attitudes and Lifestyles, 12% of British women reported ever having had an acute STI (Fenton *et al.* 2001). In contrast, men recruited in MAYISHA were more likely to report a previous STI than in the GUM and probability sample studies. With respect to HIV testing, there were no significant gender differences in the uptake of HIV testing in MAYISHA, however the proportion of women reporting an HIV test (30%) was again higher than that found in the GUM survey (11%) and higher than that anticipated for women in Britain overall.

These data confirm the occurrence of selection and participation bias within this social venue survey, which has previously been reported in similar social venue surveys among homosexual men<sup>208</sup>. Nevertheless, the data confirm that social venues remain an important site for implementing HIV health promotion activities given the target population and risk profiles.

**Ethnicity and sexual health outcomes**

In this study, many levels of ethnic identification were used to explore associations with high-risk sexual attitudes and lifestyles. Overall distribution of high-risk sexual behaviours among Black African men and women permitted comparison with other broad ethnic groups with respect to their demographic profile, sexual behaviours, use of services and sexual attitudes.

Ethnic identity based on country of origin was clearly associated with some variation in sexual health outcomes. The suggestion of higher risk behaviours among Kenyans warrant further investigation. However, this appeared to be inconsistent with the very limited evidence of heterogeneity across the other ethnic sub-groups being studied. The lack of



behavioural differences across ethnic sub-groups may reflect the cultural milieu of London in which traditional cultural boundaries are overcome by disassortative sexual and social mixing. Conversely, it may be that sexual risk practices differ less across national boundaries and may be more distinct between ethnic sub-groups (e.g. tribes). This study was not powered to examine differences between tribal sub-groups. Finally, as some tribal groups cross national boundaries (for example, a Shona tribe member may identify his/her nationality as being Zimbabwean, Zambian or South African), this may also have limited our ability to detect real differences across national groups.

Finally, the data also highlight a number of important factors which mediate the relationship between culture and sexual health outcomes. These include the process of acculturation – the progressive replacement of an individual's or group's 'culture' by another; and the role of age among successive cohorts of migrant communities. With increasing age and residence in the United Kingdom, both levels of sexual risk behaviour and activity are likely to decline among individuals who migrate (even among those who maintain strong cultural ties with their home countries). Where continued in-migration occurs, new cohorts of migrants can replenish the population at risk and, through assortative sexual mixing, maintain the community prevalence of disease.

#### **6.4.1 Limitations of this study**

Whilst achieving set objectives, there were a number of limitations of this study. Perhaps the greatest concern is selection bias resulting from recruiting respondents in social and commercial venues. This may have resulted in the recruitment of younger, single, economically productive, and sexually active individuals – thus tending to overestimate the prevalence of sexual risk behaviours. Participation bias may also have resulted from reluctance of eligible participants to get involved because interviewers were ethnically matched (thereby raising confidentiality concerns). This however may be difficult to quantify in the absence of good data on response rates, or reasons for refusals, by recruiter.

Ensuring the validity and reliability of reported risk behaviours are key concern of all sexual behaviour studies<sup>222</sup>. Completion of questionnaires in social and commercial venues may lead to willingness to report censored or socially unacceptable behaviours or attitudes. We

did not have the opportunity to re-interview respondents in order to formally assess test-retest reliability. As the first study of its kind, validation will require both external (triangulation against other studies) as well as internal (repeating this study in a similar population) strategies.

Finally, given the size and nature of the questionnaire, we were unable to explore in great detail the *cultural influences* on sexual attitudes and lifestyles among these vulnerable communities. The results therefore simply point to areas of greatest need, however are limited in explaining why these needs exist and what, if any, contribution culture, religious beliefs, socio-economic status, racial discrimination, or psycho-social well-being may play. As HIV/AIDS remains highly stigmatised among many African communities, researching these issues may be particularly difficult, but nevertheless form part of future investigations.

### **6.4.2 Lessons learnt**

#### **The acceptability of participatory research**

Participatory research and interventions remain key strategies for improving the health of marginalized communities (Macaulay *et al.* 1999). Participatory research was initially developed to improve social and economic conditions of the people being studied, and to provide a framework for responding to health issues within a social and historical context (Macaulay, Commanda, Freeman, Gibson, McCabe, Robbins, & Twohig 1999). It is particularly relevant for improving the sexual health of ethnic minority communities, among whom fear of stigmatisation, and mistrust of research and researchers may be problematic (Fenton, Johnson, & Nicoll 1997). The benefits of community participation include self-empowerment, capacity development, improved social capital, and increased lay involvement (Brown & Tandon 1983; Labonte 1994). Community partnerships may be created at any phase of an intervention but are strengthened when groups are involved from the conceptual phases of its design, implementation, analysis and dissemination.

The benefits of involving local African communities in MAYISHA were many.

Researching sexual behaviours among African communities presented many logistical concerns including gaining access to communities, researching sensitive and private

behaviours, power dynamics and relationships (between the researchers, key workers and researched) and the wider social and economic context. Active involvement of local communities enabled us as researchers to become aware of the local research priorities; obtain suggestions from key workers regarding the best way to access and undertake research within their communities; place the research within the social context and realities of those being researched; and to develop instruments and methodologies, which were appropriate to the communities being studied.

### Box 18 Involving local communities in sexual behaviour research

Benefits	Costs
❖ Data gathered in a culturally sensitive way	❖ Financial cost in managing sessional workers
❖ Research questions reflected the experiences of the community	❖ Mixed agendas which can be in conflict
❖ Community development - provision of training to key and sessional workers, creation of employment, CBO development	❖ Time and financial costs of organising training programme
❖ Project ownership is mutual	❖ Conflicting interests on how data and results should be managed
❖ Captures diversities and differences within the community	❖ Danger in drawing conclusions based on diversity of sample
❖ Guidance provided by the community representatives on key changes in the community which could affect the project	❖ The need to ensure that all interests were acknowledged and accommodated wherever possible

There were, however, a number of limitations in the process of involving communities in the research process. Dealing with five distinct African communities with varied language, migration histories and HIV experience presented its own challenges. Although all were committed to HIV prevention, not all communities were at the same stage of development of awareness, nor did they have the same level of community infrastructure on which a robust collaboration could be built.

**Partnership organisations** also had a different agenda, and the benefits of collaboration operated at different levels. For some, the information obtained in MAYISHA would go a long way in informing their organisation's development of appropriate and effective sexual health interventions. Alternatively, personal gains through participation in MAYISHA

training and research were paramount motivators for others (thus the importance of receiving certificates of participation for completing the training). The potential for misunderstanding arose when agenda conflicted with other partners in the research team (e.g. remuneration for key worker time) or with other external stakeholders (e.g. funding agencies).

**Opportunity costs.** As key workers were seconded to work on MAYISHA, this took resources away from CBOs to undertake activities for which they were being funded. Whilst MAYISHA aimed to provide urgently needed information, this conflict needed to be resolved between organisations and their funding agencies.

### **6.4.3 The way forward**

The MAYISHA project ended on 31 December 2000 and the established collaboration has continued to be involved in the development of new projects. In particular, plans are afoot to attempt to establish behavioural surveillance among African communities utilising a broadly similar approach to that in MAYISHA. In 2003, the author obtained Medical Research Council funding to repeat and extend the MAYISHA study in London, Birmingham and Luton. This project now includes anonymous salivary sampling for HIV infection.

A number of publications have also arisen from this project (Bitel & Kafeero 2000; Chinouya, Fenton, & Davidson 1999; Fenton *et al.* 2001; Fenton *et al.* 2002) (see Appendices 1 and 9) which have been instrumental in contributing to the evidence-base, informing the development of local and national HIV prevention strategies, and the development of HIV prevention programmes for African communities within Camden and Islington and inner London.

**Table 6-1. Demographic characteristics and uptake of sexual health services**

Characteristic	Male	Female	P value
Age (Years, median, range)	31 (16-70)	27 (16-68)	<0.0005
Nationality:			
Congo/Zaire	26.5 (105/396)	20.2 (71/352)	0.12
Kenya	15.4 (61/396)	17.1 (60/352)	
Uganda	17.7 (70/396)	17.6 (62/352)	
United Kingdom	1.3 (5/396)	1.4 (5/352)	
Zambia	15.4 (61/396)	12.8 (45/352)	
Zimbabwe	17.4 (69/396)	25.3 (89/352)	
Other	6.3 (25/396)	5.7 (20/352)	
Country of birth:			
Africa	94.9 (332/350)	92.9 (289/311)	0.56
United Kingdom	3.7 (13/350)	4.8 (15/311)	
Other	1.4 (5/350)	2.3 (7/311)	
Region of residence between 10-16 years of age:			
Africa	85.5 (337/394)	81.2 (285/351)	0.28
Outside Africa	14.2 (56/394)	18.5 (65/351)	
Both	0.3 (1/394)	0.3 (1/351)	
Median (range) length of residency in the United Kingdom, years:	6 (1-63)	6 (1-77)	0.27
Employment status:			
Employed	50.3 (196/390)	40.8 (142/348)	<0.0005
In education, not employed	26.7 (104/390)	33.1 (115/348)	
Caring for home/ family, not employed or in education	3.6 (14/390)	9.8 (34/348)	
Unemployed / Other	19.5 (76/390)	16.4 (57/348)	
Highest level of formal education received:			
None	0.8 (3/392)	0.9 (3/353)	0.001
Primary	3.1 (12/392)	5.1 (18/353)	
Secondary	20.9 (82/392)	33.1 (117/353)	
University/ college	54.6 (214/392)	47.9 (169/353)	
Professional training	19.6 (77/392)	12.8 (45/353)	
Other	1.0 (4/392)	0.3 (1/353)	
Marital status:			
Married	40.1 (157/392)	27.8 (98/352)	0.003
Widowed/ Separated / Divorced	4.9 (19/392)	7.7 (27/352)	
Cohabiting	14.5 (57/392)	17.6 (62/352)	
Partner but not cohabiting	10.0 (39/392)	15.3 (54/352)	
Single	30.6 (120/392)	31.5 (111/352)	
Ever been previously diagnosed with an STI?:			
Never	71.2 (255/358)	79.5 (252/317)	0.001
>5 years ago	13.1 (47/358)	4.4 (14/317)	
Between 1-5 years	10.1 (36/358)	10.7 (34/317)	
Within past year	5.6 (20/358)	5.4 (17/317)	
Ever knowingly had an HIV test?:			
Never	66.1 (226/342)	70.0 (217/311)	0.54
>5 years ago	4.1 (14/342)	4.2 (13/311)	
Between 1-5 years	17.0 (58/342)	16.7 (52/311)	
Within past year	12.9 (44/342)	9.3 (29/311)	

**Table 6-2. High-risk sexual behaviours**

Characteristic	Male	Female	P value
New sexual partner in the last year?: Yes	43.1 (173/401)	40.4 (143/354)	0.45
Proportion using condoms for last act of intercourse:	46.1 (167/362)	42.9 (129/301)	0.40
Reasons for using condoms on last occasion of intercourse :			
Pregnancy	18.8 (30/160)	16.9 (22/130)	0.006
STD/HIV	24.4 (39/160)	11.5 (15/130)	
Both pregnancy and HIV	51.3 (82/160)	69.2 (90/130)	
Other reason	5.6 (9/160)	2.3 (3/130)	
Use of vaginal herbs:			
Frequently in the United Kingdom	3.9 (14/357)	4.9 (16/325)	<0.0005
Occasionally in the United Kingdom	5.0 (18/357)	6.8 (22/325)	
Not in United Kingdom, but in home country	9.5 (34/357)	9.9 (32/325)	
Never used	43.4 (155/357)	62.2 (202/325)	
Unsure/Don't know	38.1 (136/357)	16.3 (53/325)	
Travelled abroad to visit home country in past 5 years:	42.9 (149/347)	46.1 (143/310)	0.41
Sexual intercourse with new partner when visiting home country:	34.8 (57/164)	17.8 (28/157)	0.001



**Table 6-3 High-risk sexual behaviours by length of residence in Britain**

	Length of residence in the United Kingdom					
	Men		p Value	Women		p Value
	< 5 years	≥ 5 years		< 5 years	≥ 5 years	
Age (Years, median, range):	29 (16-70)	33 (16-59)	0.0001	25 (17-46)	29 (16-48)	0.0001
Nationality:						
Congo/Zaire	36 (48/135)	23 (42/182)	<0.005	25 (36/146)	17 (26/156)	<0.005
Kenya	25 (34/135)	10 (18/182)		22 (32/146)	15 (23/156)	
Uganda	10 (13/135)	23 (41/182)		14 (21/146)	23 (36/156)	
United Kingdom	0 (0/135)	3 (5/182)		0 (0/146)	3 (5/156)	
Zambia	9 (12/135)	19 (35/182)		5 (7/146)	16 (25/156)	
Zimbabwe	15 (20/135)	14 (26/182)		27 (39/146)	24 (37/156)	
Other	6 (8/135)	8 (15/182)		8 (11/146)	3 (4/156)	
Marital status:						
Married	30 (40/133)	43 (79/184)	0.03	21 (31/146)	33 (51/156)	0.18
Wid/ Sep / Div	3 (4/133)	7 (13/184)		7 (10/146)	9 (14/156)	
Cohabiting	17 (22/133)	16 (29/184)		19 (28/146)	15 (24/156)	
Partner/ not cohab	14 (18/133)	8 (14/184)		18 (27/146)	16 (25/156)	
Single	37 (49/133)	27 (49/184)		34 (50/146)	27 (42/156)	
% ever diagnosed with an STI?:						
Never	69 (86/124)	70 (116/165)	0.04	80 (104/130)	76 (109/143)	0.11
>5 years ago	9 (11/124)	18 (29/165)		2 (2/130)	8 (11/143)	
Between 1-5 years	13 (16/124)	8 (14/165)		12 (15/130)	11 (16/143)	
Within past year	9 (11/124)	4 (6/165)		7 (9/130)	5 (7/143)	
Median (range) number of sexual partners in the past year:	2 (0-14)	1 (0-19)	0.03	1 (0-20)	1 (0-10)	0.09
Proportion reporting negative peer group norms about using condoms with new partners:	39 (47/122)	26 (43/165)	0.02	24 (33/137)	20 (26/132)	0.38

**Table 6-4. Factors associated with the acquisition of new sexual partners whilst travelling abroad to visit country of origin (n= 269)\***

Variable	Proportion acquiring new partners abroad % (n/N)	Crude odds ratio (95% CI)
Gender:		
Male	40 (55/138)	2.53 (1.47 – 4.35)
Female	21 (27/130)	1 -
Age Group (years):		
<25	25 (13/53)	1 -
25-29	34 (25/73)	1.60 (0.73 – 3.53)
30-34	39 (22/56)	1.99 (0.87 – 4.54)
>34	27 (21/78)	1.13 (0.51 – 2.53)
Length of residence in the United Kingdom, years (years):		
0-2	25 (5/20)	1 -
3-5	40 (22/55)	2.00 (0.64 – 6.30)
6-9	41 (26/64)	2.05 (0.66 – 6.34)
10+	23 (21/90)	0.91 (0.30 – 2.81)
Marital status:		
Married	25 (23/91)	1 -
Widowed/ Separated/ Divorced	59 (13/22)	4.27 (1.61 – 11.3)
Cohabiting	39 (18/46)	1.90 (0.89 – 4.05)
In relationship	31 (10/32)	1.34 (0.55 – 3.25)
Single	24 (18/75)	0.93 (0.46 – 1.90)
Previously diagnosed with an STD:		
Yes	57 (46/81)	6.21 (3.43 – 11.3)
No	17 (29/166)	1 -
Ever had an HIV test:		
Yes	22 (23/107)	0.52 (0.29 – 0.93)
No	35 (48/139)	1 -
More than 5 sexual partners in past year:		
Yes	76 (13/17)	8.62 (2.72 – 27.3)
No	27 (69/252)	1 -
Condom use at last intercourse / reason:		
Pregnancy	13 (2/15)	1 -
STDs/HIV	62 (16/26)	10.4 (1.93 – 56.1)
Both	18 (14/76)	1.47 (0.30 – 7.25)
Other	0 (0/5)	-
Not used	42 (49/118)	4.62 (1.00 – 21.4)
Perceived risk of catching HIV/AIDS		
Yes	32 (29/91)	0.95 (0.55 – 1.66)
No	33 (52/158)	1 -
Peer group norms about using condoms with new partners		
Positive	29 (55/190)	1 -
Negative	53 (26/49)	2.77 (1.46 – 5.28)

**NOTES:**

\*Analysis includes only those who stated that they had returned to their home countries within the past five years, and answered question concerning new partner acquisition whilst there.

\*\*Odds ratios are adjusted for gender, age-group, nationality, time in United Kingdom, and relationship status

† The five target countries of origin (Congo, Kenya, Uganda, Zambia and Zimbabwe) have been anonymised (Groups 1-5) in accordance with wishes of our African community collaborators. All other nationalities (non-target group or non-United Kingdom) included in the Other category.



**Table 6-5. Factors associated with the uptake of HIV testing among African women and men**

Variable	WOMEN		MEN	
	Proportion having an HIV test %(n/n)	Crude odds ratio (95% CI)	Proportion having an HIV test %(n/n)	Crude odds ratio (95% CI)
Age Group (years):				
<25	21 (22/105)	1 -	17 (11/63)	1 -
25-29	36 (32/90)	2.08 (1.10 - 3.94)	31 (27/86)	2.16 (0.98 - 4.79)
30-34	50 (29/58)	3.77 (1.88 - 7.57)	39 (31/80)	2.99 (1.36 - 6.60)
>35	40 (25/63)	2.48 (1.24 - 4.95)	46 (53/116)	3.98 (1.89 - 8.39)
Nationality:				
Congo/Zaire	39 (27/69)	1 -	27 (24/90)	1 -
Kenya	23 (13/57)	0.46 (0.21 - 1.01)	21 (12/56)	0.75 (0.34 - 1.65)
Uganda	47 (27/58)	1.35 (0.67 - 2.74)	51 (30/59)	2.84 (1.42 - 5.68)
UK	40 (2/5)	1.04 (0.16 - 6.62)	40 (2/5)	1.83 (0.29 - 11.7)
Zambia	44 (17/39)	1.20 (0.54 - 2.67)	45 (25/55)	2.29 (1.13 - 4.64)
Zimbabwe	26 (21/82)	0.54 (0.27 - 1.07)	41 (26/63)	1.93 (0.97 - 3.84)
Other	35 (7/20)	0.84 (0.30 - 2.37)	36 (8/22)	1.57 (0.59 - 4.21)
Length of residence in the UK (years):				
0-2 years	24 (14/58)	1 -	44 (19/43)	1 -
3-5 years	36 (30/83)	1.78 (0.84 - 3.77)	30 (24/81)	0.53 (0.25 - 1.15)
6-9 years	37 (24/65)	1.84 (0.84 - 4.03)	36 (31/87)	0.70 (0.33 - 1.47)
10+ years	37 (30/81)	1.85 (0.87 - 3.92)	40 (29/73)	0.83 (0.39 - 1.79)
Highest level of formal education received:				
Secondary or less	31 (41/132)	1 -	20 (17/87)	1 -
University/College	34 (54/157)	1.16 (0.71 - 1.91)	41 (81/196)	2.90 (1.59 - 5.29)
Professional / Other	47 (20/43)	1.93 (0.96 - 3.90)	43 (30/70)	3.09 (1.52 - 6.29)
Previously diagnosed with an STD?:				
Yes	49 (34/69)	2.11 (1.22 - 3.64)	51 (51/100)	2.51 (1.55 - 4.06)
No	32 (76/241)	1 -	29 (70/239)	1 -
More than 5 sexual partners in past year:				
Yes	29 (2/7)	0.75 (0.14 - 3.93)	52 (12/23)	2.02 (0.87 - 4.72)
No	35 (113/325)	1 -	35 (116/331)	1 -
Condom use at last intercourse / reason :				
Pregnancy	57 (12/21)	2.50 (0.99 - 6.29)	56 (14/25)	2.47 (1.05 - 5.82)
STDs/HIV	40 (6/15)	1.25 (0.42 - 3.69)	34 (12/35)	1.01 (0.47 - 2.19)
Both	34 (29/85)	0.97 (0.56 - 1.69)	40 (33/82)	1.31 (0.76 - 2.27)
Other	33 (1/3)	0.94 (0.08 - 10.6)	56 (5/9)	2.43 (0.63 - 9.42)
Not used	35 (55/158)	1 -	34 (54/159)	1 -
Perceived to be at risk of catching HIV/AIDS :				
Yes	34 (41/120)	1.02 (0.63 - 1.66)	48 (57/120)	2.35 (1.47 - 3.76)
No	34 (61/181)	1 -	28 (57/205)	1 -
Peer group norms about using condoms with new partners				
Positive	37 (84/227)	1 -	37 (81/220)	1 -
Negative	25 (17/67)	0.58 (0.31 - 1.07)	31 (30/96)	0.78 (0.47 - 1.30)

**Table 6-6. Heterogeneity in explanatory and outcome variables across the five national groups by gender**

Indicator	Men	Women	Comment
1. Length of residence in the United Kingdom	$X^2 = 73.8$ , $p < 0.001$	$X^2 = 65.1$ , $p < 0.001$	Over 70% of Zambian and Ugandan men and women resident within United Kingdom for >5 years. Other groups more recently arrived.
2. Resident in United Kingdom 5 years or less	$X^2 = 32.0$ , $p < 0.001$	$X^2 = 21.7$ , $p < 0.001$	As above. Over 50% of Kenyan and Congolese women and men resident within the United Kingdom for less than 5 years. Just under 50% of Zimbabwean communities resident for this period.
3. Marital Status	$X^2 = 42.1$ , $p < 0.001$	Not significant	Kenyan men (20%) less likely to be married than other groups (range for other groups 35-56%).
4. Educational achievement	$X^2 = 25.2$ , $p = 0.01$	Not significant	Ugandan, Zambian and Zimbabwean men (>70%) and women (>60%) more likely to have university/professional education than Kenyan and Congolese.
5. Employment status	$X^2 = 69.3$ , $p < 0.001$	$X^2 = 69.3$ , $p < 0.001$	Higher proportions (50-60%) of Zambian and Zimbabwean men and women employed FT compared with 40-40% of other nationalities. Lowest employment in Congolese women (20%).
6. New sexual partner in past year	$X^2 = 56.6$ , $p < 0.001$	Not significant	Higher mean nos. or partners reported among Kenyan compared with other communities.
7. Acquisition of new sex partner abroad	$X^2 = 37.3$ , $p < 0.001$	$X^2 = 69.3$ , $p < 0.001$	Kenyan men (46%) and women (25%) more likely to report new sexual partner abroad than all other groups.
8. Ever had an HIV test	$X^2 = 17.0$ $P = 0.002$	$X^2 = 12.1$ $p = 0.016$	Kenyan (26%) and Congolese (21%) men less likely to HIV test than others (>40%); Ugandan (47%) and Zambian (44%) women more likely than others.
9. Ever had STI	$X^2 = 29.9$ $P < 0.001$		Kenyan men and women (>40%) most likely to report previous STI; Zimbabweans least likely (<20%).
10. Perceived risk of catching AIDS	Not significant	$X^2 = 22.8$ $p = 0.03$	Zambian women (37%) least likely to perceive themselves to be at risk of catching HIV/AIDS compared with over 50% of all other nationals.
11. Peer norms against condoms with new partners	36.9286 $Pr = 0.000$	33.8449 $p = 0.001$	50% of Congolese men and 30% of Kenyans and Ugandans agree with statement; Fewer than 20% of Zimbabweans and Zambians agree. Among women, fewer Zimbabweans and Zambians agreed with the statement than other groups.

## Chapter 7.

# Findings from a national probability survey of sexual attitudes and lifestyles

### CHAPTER SUMMARY

**Background:** The 2<sup>nd</sup> National Survey of Sexual Attitudes and Lifestyles (Natsal 2000) provided a unique opportunity to examine variations in sexual health outcomes across Britain's main ethnic groups, relating them to key demographic and behavioural variables.

**Methods:** A stratified probability sample survey of 11,161 men and women aged 16-44 years in Britain using computer-assisted self-interviews was undertaken. Additional targeted recruitment was undertaken to add a further 969 Black Caribbean, Black African, Indian and Pakistani respondents for more detailed analysis of ethnic variations.

**Results:** Marked heterogeneity in patterns of heterosexual partnership formation was observed across ethnic groups and between genders within each ethnic group. Mean numbers of heterosexual partners in the last five years and lifetime were highest in Black Caribbean and Black African men and among White and Black Caribbean women. Black Caribbean and Black African men also reported high prevalence of concurrency and higher rates of partner acquisition in the past year. Indian and Pakistani groups had substantially lower prevalence of high-risk behaviours and corresponding lower prevalence of adverse sexual and reproductive health outcomes (STIs, GUM attendance, TOP, conception under 18, coitarche under 16) than all other groups. With the exception of Black Caribbeans, sexual mixing was highly assortative across ethnic groups.

**Interpretation:** Natsal 2000 provided updated estimates of sexual behavioural patterns and is the largest such survey ever undertaken among ethnic minorities in Britain. The study confirmed the substantial variations in behavioural risk and outcomes across ethnic groups.

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**Candidate's contribution to this work:** I was a co-investigator in Natsal 2000. I took a lead role in the development and design of the study's *ethnic minority boost*. The analyses in this chapter incorporates formats originally developed and presented in a series of Lancet articles from Natsal 2000 (Fenton *et al.* 2001; Johnson *et al.* 2001; Wellings *et al.* 2001). All analyses in this chapter were undertaken by Catherine Mercer, statistician at UCL, however I developed the analysis strategy, key tables and interpretation of the data.

## 7.1 BACKGROUND

The literature review presented in Chapter 3 identified a range of studies describing racial or ethnic variations in adverse sexual health outcomes. Most were undertaken among non-randomly selected samples of GUM clinic attenders. Given the inherent bias in these studies, their conclusions were often unrepresentative of the wider community. Indeed, as the GUM clinic study presented in Chapter 4 has shown, controlling for patient mix (by studying first-time attenders) and reducing selection bias (by randomly selecting participants) failed to remove ethnic variations in diagnostic outcomes. Clearly other factors, such as ethnic variations in attitudes towards and usage of GUM clinics, perception of risk (highlighted in Chapter 4), migration history, gender and high-risk behaviours (highlighted in Chapter 5), may also be contributing to the observed variations.

A more robust method for exploring ethnic variations in sexual health would be to undertake a large-scale survey using probability sampling techniques, maximising response rates, to provide robust estimates of the prevalence of behaviours and their determinants in the population. However, such surveys are frequently not large enough to determine the prevalence of behaviours among small population sub-groups (e.g. ethnic minorities) or among individuals with relatively rare experiences (e.g. injecting drug use), which may be particularly important in HIV/STI transmission.

The opportunity to undertake such a study was made possible in the second National Survey of Sexual Attitudes and Lifestyles (Natsal 2000). This was a Medical Research Council funded probability sample survey of sexual attitudes and lifestyles among British residents aged 16–44 years undertaken between 1999 and 2001. The first National Survey of Sexual Attitudes and Lifestyles (Natsal 1990) was undertaken in 1990/1, and was the first and most comprehensive study of sexual behaviour in Britain. However, it had limited capacity to explore ethnic variations in sexual health since, although proportionate, the total number of non-white racial groups was relatively small (986 of 18,876 respondents), and broad racial categories (Black, White, Asian) were used.

As a national probability sample study, Natsal 2000 provided an excellent opportunity to explore ethnic variations in sexual attitudes and lifestyles at the population level, thereby avoiding many of the biases associated with recruitment from health-care settings. The comprehensive data set would also permit the exploration of wider determinants of sexual health including social (family and peer), economic, and cultural influences; and the exploration of ethnic variations in reproductive health outcomes including conception under 18 years and termination of pregnancy at the population level.

### **7.1.1 Chapter objectives**

This chapter uses data from Natsal 2000 to explore and measure the magnitude of ethnic variations in high-risk sexual behaviour and sexual health outcomes across Britain's main ethnic groups.

Specific chapter objectives are to: 1) outline the methodology for this population-based survey; 2) describe ethnic variations in sexual and reproductive health outcomes at the population level; and 3) explore the associations of key demographic and behavioural factors on these outcomes of interest.

## **7.2 METHODS**

### **7.2.1 Study objectives**

The key objectives of Natsal 2000 were:

- 1) To carry out a survey of sexual attitudes and lifestyles in a random sample of 12,000 men and women aged 16–44 resident in Britain using computer-assisted interviewing techniques.
- 2) To carry out urinary testing by Ligase Chain Reaction on urine to measure the prevalence of genital chlamydial infection in the sample.
- 3) To use the data generated from the survey to:



- Provide a detailed understanding of patterns of sexual behaviour in Britain;
  - Provide data for HIV/AIDS projections in Britain;
  - Assess whether changes in behaviour have occurred since 1990/91;
  - Provide information to guide health promotion strategies and development of sexual health services;
  - Assess prevalence and demographic and behavioural risks for genital *Chlamydia trachomatis* infection and other reported STD to guide control strategies;
- 4) To carry out a targeted survey of sexual attitudes and lifestyles in a random sample of 1000 men and women of Black Caribbean, Black African, Indian, and Pakistani ethnicity (an ethnic minority boost) aged 16-44 years, resident in Britain using computer-assisted interviewing techniques in order to increase the complement of ethnic minorities contained in the sample.

### **7.2.2 Natsal 2000 – main survey methods**

#### **Sampling methods**

For the Natsal 2000 survey, a stratified sample of 40,523 addresses was selected from the small-user postcode address file for Britain, using a multistage probability cluster design with over-sampling in Greater London (where the prevalence of risk behaviours was expected to be higher (Wadsworth *et al.* 1996)). Sampling ratios were 3.5 in Inner London and 1.8 in Outer London relative to the rest of the country. Interviewers from the National Centre for Social Research visited all selected addresses between May 1999 and February 2001.

From the 40,523 addresses visited, 16,998 households were identified with an eligible resident aged 16-44 years. At 1,425 (3.5%) addresses, eligibility was not known as no contact was achieved (after a minimum of four attempts) or all information was refused. Interviews were completed with 11,161 respondents. At each address, residents aged 16-44

were enumerated, and one was randomly selected to participate in the study. Interviews took place in respondents' homes. On completion of the main interview, half of the respondents (in alternate sample points) were invited to provide a urine specimen for testing by Ligase Chain Reaction for *Chlamydia trachomatis*. The main results of Natsal 2000 including the chlamydia prevalence study, have been reported elsewhere (Fenton *et al.* 2001). Relevant study materials (including patient information leaflets etc) are contained in Appendix 10.

### **Questionnaire**

A study questionnaire was developed for a combination of face-to-face computer-assisted personal interviews carried out by trained interviewers, and computer-assisted self-interview (CASI) (see Appendix 11). The CASI component allowed respondents to key their responses to more sensitive questions into a laptop computer. This was previously demonstrated to be highly acceptable in a preceding feasibility study<sup>13</sup>. Interviewers were present for the CASI component of the interview to provide assistance if required, but were not permitted to view responses, which were 'locked' inside the computer after the module was completed.

The majority of questions were identical to Natsal 1990 with some new questions that focused on patterns of partnership formation, sexual mixing and STI acquisition. Topics included: age at first intercourse; homosexual and heterosexual experiences including numbers of partners; sexual practices; and attitudes. Those with no sexual experience of any kind, and 16 to 17 year olds with some heterosexual experience but no heterosexual intercourse or homosexual experience reported in screening questions, were not given the CASI module.

### **Response rates**

The unadjusted response rate in Natsal 2000 was 63.1%. Response rates were lower in London, and an adjustment taking account of the over-sampling of London, gave a response rate of 65.4%. Response rates were calculated excluding those who did not speak English,

were sick or away from home (545 selected residents), and after estimating the likely proportion of ineligible in the 1,425 households, where there was no information about residents.

### **Data management**

The data were weighted to adjust for the unequal probabilities of selection i.e. residence in Inner London, Outer London and rest of Britain; and number of eligible residents in the household. After selection weighting, the sample was broadly representative of the British population, although men and London residents were slightly under-represented, as were those aged 25-29 (compared with 1999 population estimates) (Office for National Statistics 2000;Registrar General for Scotland 2000). To correct for differences in gender, age-group and government office region between the achieved sample and population estimates, a non-response/post-stratification weight was applied. Comparison with the 1998 Health Survey for England (Erens & Primatesta 1999) showed that after application of the final weights there were no major differences in sample structure by marital status, social class, and the proportion of households with children.

### **7.2.3 Natsal 2000 ethnic minority boost - methods**

The Natsal 2000 ethnic minority boost (EMB) – targeted sampling of Black and ethnic minority respondents – was a multi-stage study involving an initial sample of 15000 addresses from the post office address file (PAF). All addresses were visited using a combination of full screening and focused enumeration in order to determine whether they contained residents from the target ethnic minority groups. Addresses were only eligible for the survey if they contained at least one adult aged 16-44 from Black Caribbean, Black African, Indian and Pakistani ethnic groups. In order to ensure data comparability, the methodology employed in the boost was broadly similar to that used in the main survey. Chief differences were: 1) the adaptation of the sampling strategy to identify appropriate respondents; 2) the production and utilisation of translated study materials and 3) the



exclusion of the LCR *C. trachomatis* testing component.

### **Sampled ethnic groups**

The Natsal 2000 ethnic minority boost focused on four communities: Black Caribbeans, Indians, Pakistanis and Black Africans. As Indians, Pakistanis and Black Caribbeans account for the largest ethnic minority communities in Britain (see Box 5, page 81), the decision to focus on these communities was largely pragmatic. Other ethnic groups, e.g. Bangladeshi, Chinese, and Other Asians account for much smaller proportions of the British population and would be more difficult and costly to sample because of their small numbers nationwide, and a lack of information as to their areas of residence. However, there were also public health imperatives. Additional information on Black Caribbeans was considered of particular interest given research and surveillance data suggesting poor sexual health outcomes in this group. Black Africans account for a relatively small proportion of the British population, but were included in the boost given concerns regarding HIV/AIDS prevalence and transmission risk in Britain. The emergence and escalation of HIV incidence in the Indian subcontinent and the close familial ties maintained by British resident Indians and Pakistanis justified a focus on these communities.

### **Sampling frame and sample design**

The ethnic minority boost (EMB) aimed to nearly double the numbers of individuals from the target communities recruited in the baseline survey, so that the *effective* sample size would be about 250 per group. As with the main study, ethnic minority respondents would be identified by screening a probability sample of addresses. Ethnic identification would be self-defined, using questions based on those, which were included in the 2001 Census.

In the main study, the sample was obtained using a multi-stage stratified probability design. However, before selection in the EMB, all postcode sectors in Britain were grouped into three strata defined in terms of the density of their ethnic minority populations (using data from the 1991 Census). Stratum A included postcode sectors where more than 12% of the resident population was of ethnic minority origin (Pakistani, Black Caribbean, Indian or

Black African); stratum B included postcode sectors with less than 12% and more than 6%; and stratum C included all other postcode sectors. Within each of these strata, the postcode sectors were sorted into region/ density/ age bands (similar to the main survey) and 150 sectors selected systematically, with each postcode sector being given a probability of selection proportional to its total number of delivery points.

In postcode stratum A, a full screening operation was carried out. Interviewers were issued with a sample of addresses and required to contact each address to determine whether there were any residents eligible for inclusion in the survey. Interviews with ethnic minority respondents living in stratum C were provided from the main Natsal 2000 sample, and these sectors were therefore excluded from the EMB.

In stratum B sectors, which had a fairly low density of people from ethnic minority groups, focused enumeration was utilised to cover these addresses, and to screen and identify eligible respondents. Focused enumeration provides a cost-effective way for screening large number of addresses. It makes use of local knowledge by asking neighbours to identify members of ethnic minority groups living at directly adjacent addresses. Thus in stratum B, interviewers were given a sample of 20 addresses in each postcode sector and screened for eligibility at the sampled address as well as determining whether any potentially eligible persons lived at the two addresses either side of the sampled address. If positive identifications are made and people of ethnic minority groups are said to live at the non-visited addresses, the interviewers are instructed to visit those addresses in person.

A further feature of the EMB sample design was that it aimed to obtain a minimum number of respondents within each of the four target groups, while keeping the total number of respondents per group approximately the same. In order to achieve this, we did not screen for Indian and Black Caribbean groups in all stratum A sample points (only 18 of 72), focusing instead on recruiting only Black African and Pakistani respondents in a larger proportion (54 of 72) of sectors. All four ethnic groups were screened in stratum B sample points. The final sample design involved an issued sample of 7200 addresses (clustered into 72 sample points) in Stratum A. 1560 addresses (42 sample points) were sampled in Stratum

B, and a further 6240 adjacent addresses were to be approached by focussed enumeration. Thus a total of 15,000 addresses were covered by the screening exercise.

As with the main study, at addresses with more than one household, all households up to a maximum of three were included. If there were more than three, then interviewers randomly selected three for inclusion in the sample. The sample was weighted to take account of the omitted households. Another 41 households were included in the sample at multi-household addresses. At each screened address (where one or more residents from one of the target groups was eligible) interviewers listed the ethnic minority adults aged 16–44. Where more than one eligible resident was found in a household, one was randomly selected using a Kish grid technique.

### Sample size estimates

Using the best estimates available for the population size of the relevant ethnic minority groups in the eligible age range within the selected postcode sectors, and assuming a response rate of 60%, the EMB was expected to achieve about 685 interviews, distributed among the four ethnic minority groups as follows: 230 (315) Pakistanis, 150 (430) Caribbeans, 175 (380) Indians and 130 (295) Africans. (The figures in brackets are the total number for each ethnic minority group after the inclusion of interviews from the main Natsal 2000 sample.)

### Box 19. Estimated sample of target ethnic minority communities following boost in Natsal 2000

	Issued points	Issued addresses point	Achieved Pakistani	Achieved Black Caribbean	Achieved Indian	Achieved Black African	Total achieved
Stratum A	58	150	200	125	150	105	528
Stratum B	42	150	30	25	25	25	421
Stratum C	-	-	-	-	-	-	-
Total boost	100	15000	230	150	175	130	949
Core sample	466	39828	85	280	205	165	735
TOTAL	566	54828	315	430	380	295	1420

### Precision and power

The ethnic boost sample was designed in such a way as to achieve an effective sample size

of 250 per ethnic group. With a sample size of 250 per group, the 95% confidence interval around a prevalence estimate of, say, 10% will be (6.3%, 13.7%); whereas the 95% confidence interval around a prevalence estimate of 50% will be (43.8%, 56.2%). Where the behaviour is thought to differ markedly between sexes then these figures will be presently separately by gender. Hence the sample size will be roughly 125 per group and confidence intervals around 10% and 50% will be roughly (4.7%, 15.3%) and (41.2%, 58.8%). These intervals were considered to be narrow enough for most purposes.

To a lesser extent the survey data would also be used to test for differences between groups. Such comparisons will typically be adjusted for gender and other important factors. For a behaviour with a prevalence around 15% (e.g. Ever HIV test, 5+ heterosexual partners in the last five years, ever attended STD/GUM clinic) the study would have 80% power to detect a difference of 9 percentage points between any two groups (using a 5% significance test); for a variable with a higher prevalence of, say, 40-50% (e.g. condom use in the last year) it would have 80% power to detect a difference of 13 percentage points between any two groups. To reduce this difference to 5 percentage points (assuming a prevalence of 50% and 80% power) the sample size would need to be increased from 250 per group to a prohibitively expensive 1500 per group.

### **Fieldwork procedures**

Fieldwork for the EMB was carried out over a nine-month period, commencing November 2000, by 116 screeners and 102 interviewers. Aside from the very large screening for ethnic minority residents (therefore necessitating the separation of screening and interviewing procedures), in all other respects the fieldwork procedures were identical to those used in the main Natsal 2000 survey.

In the screening process, screeners were asked only to identify which addresses contained at least one resident eligible to take part in the survey, not to introduce the survey or to make selections. The screening question for ethnicity asked whether any resident was of 'Black Caribbean, Black African, Indian or Pakistani origins'. If the word 'origins' was queried,

interviewers would read out the following definition: *'By someone of these ethnic origins, I mean someone whose family came originally from India or Pakistan or someone who is Black and whose family came originally from the Caribbean or from Africa'*. All addresses where there was an eligible person were then passed on to the interviewers. At all screened addresses, interviewers asked the screening questions again to confirm eligibility and to randomly select the person to interview. Further details of the screening procedures are summarised elsewhere.

Introductory letters, used in the main survey to briefly introduce the study and an impending visit from an interviewer, were also used in the EMB sample. However, interviewers actually handed the introductory letter directly to the selected respondent. If further information about the survey was required at the screening or interview stages, then a copy of the letter would be given to them.

Tokens of appreciation (a £10 gift voucher) were provided to each respondent who completed the questionnaire, irrespective of whether they completed the CASI questionnaire.

### **Production and utilisation of ethnically appropriate research materials**

With the exception of equipment used for the LCR chlamydia testing component in the main Natsal 2000 survey, all study materials utilised in Natsal 2000 were used for the ethnic boost. Thus for English speakers, both the CASI (self-completion) and CAPI face-to-face components were identical to that used in the main study. To facilitate Indian and Pakistani respondents for whom English was not a first language, all study materials (information leaflets, advance letters), including the face-to-face and the self-completion questionnaires were made available in Punjabi and Urdu. Study materials were translated and back-translated prior to introduction in the field. Interviewers who could speak and read these languages were recruited and trained in the survey procedures. Other people in the household were never used as interpreters for respondents who could not speak English sufficiently well to be interviewed in English. In these instances, an interviewer who could speak the appropriate language would be allocated to conduct the interview. Non-English

self-completion questionnaires were provided in paper format (rather than CASI).

#### **7.2.4 Data analysis**

All analyses were performed using the complex survey functions of STATA version 6, which incorporated the weighting, clustering, and stratification of the data. Because the proposed design for the ethnic boost involved over-sampling ethnically dense areas, selecting only one adult per household, and merging ethnic minority respondents from the boost and main Natsal 2000 samples together, the data needed to be weighted in order to obtain unbiased estimates. However, since weighting increases variance, with the level of increase depending upon the range of the weights, estimates would be less precise (have larger standard errors) than if a simple random sample has been used, so the effective sample size<sup>ii</sup> would be smaller than  $n^{iii}$ . The estimated effective sample sizes (sample efficiency is given in brackets) by ethnic group are<sup>vi</sup>: Pakistani: 245 (78%), Black Caribbean: 309 (72%), Indian: 286 (75%), Black African: 225 (77%).

The odds ratio (OR) was used to compare estimates between the 2000 and 1990 surveys. Logistic regression was used to calculate adjusted ORs to control for any variation in the age, gender and marital status distribution between the two surveys.

#### **7.2.5 Ethics**

Ethical approval for Natsal 2000 was obtained from the University College Hospital/

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<sup>ii</sup> The effective sample size (neff) is a measure of the size of an (unweighted) simple random sample that would have provided the same precision (standard error) as the design being implemented.

<sup>iii</sup> In calculating the effective sample size the following factors were taken into account: a) the expected number of 16-44 year olds living in 1,2,3 and above persons households, b) the estimated distribution of the sample by inner London, outer London and rest of Britain for each stratum separately, and c) the estimated distribution of the sample across strata. The former is needed for weighting up respondents coming from more than one-person households, and the latter because the core sample is partitioned in that way, and therefore in the total ethnic sample account needs to be taken for the fact that there are two differential sampling fractions, one for the core and one for the boost sample.

<sup>vi</sup> It has to be noted that the above calculations only take into account the effect of weighting which is only one of the three factors that affect the efficiency of the sample. The other two are stratification and clustering. Although stratification tends to increase sample efficiency, clustering on the other hand tends to decrease it.

University College London Research Ethics Committee, North Thames Region Multicentre Research Ethics Committee and Local Research Ethics Committees throughout Britain.

## 7.3 RESULTS

### 7.3.1 Description of sample

Data from the ethnic minority boost added a further 949 observations to the 11,161 sampled in the main survey. This represented a response rate of 62.9% of known eligible individuals using CASRO rules (where respondents who are ill, away from home, or unable to speak one of the languages available for interview are classed as ineligible), as shown in Box 20.

**Box 20. Response rate for the Natsal 2000 ethnic minority boost sample, using the CASRO rules**

	STRATUM A		STRATUM B	Total
	<i>Sample 1</i>	<i>Sample 2</i>	<i>Sample 3</i>	
<b>Estimate eligible addresses</b>	<b>362 (100%)</b>	<b>473 (100%)</b>	<b>674 (100%)</b>	<b>1509 (100%)</b>
No interview because:				
No contact with selected person	25 (6.9%)	38 (8.0%)	60 (8.9%)	123 (8.2%)
Refused	106 (29.3%)	105 (22.2%)	171 (25.4%)	382 (25.3%)
Other reason	15 (4.1%)	8 (1.7%)	16 (2.4%)	39 (2.6%)
No information about address	6 (1.7%)	4 (0.8%)	6 (0.9%)	16 (1.1%)
Total unproductive	152 (42.0%)	155 (32.8%)	253 (37.5%)	560 (37.2%)
<b>Completed interviews</b>	<b>210 (58.0%)</b>	<b>318 (67.2%)</b>	<b>421 (62.5%)</b>	<b>949 (62.9%)</b>

Note: Sample 1 = 18 sectors in stratum A where full screen done with Black African, Black Caribbean, Indian and Pakistani; Sample 2 = 54 sectors in stratum A where full screen done only with Black African and Pakistani only; Sample 3 = all 78 sectors in stratum B where full screen done for Black African, Black Caribbean, Indian and Pakistan at sampled addresses, and focused enumeration for these groups at two addresses on either side.

Box 21 shows the response rate to the self-completion questionnaire for the Natsal 2000 main and EMB samples. Among eligible EMB respondents, 6% of men and 5 % of women refused the CASI and the paper booklet (compared with only 1% of the main sample). A further 8% of ethnic minority respondents had the questions read out to them by the interviewer, twice as large as the percentage found in the general population.

**Box 21. Response rate to the self-completion questionnaire for the Natsal 2000 main and EMB samples by gender**

	Men		Women	
	Main sample	EMB	Main sample	EMB
Eligible for self-completion questionnaire	4569 (100%)	473 (100%)	6203 (100%)	493 (100%)
Completed using CASI:				
Without assistance	3711 (81%)	238 (63%)	4866 (78%)	288 (58%)
With assistance	601 (13%)	79 (21%)	994 (16%)	137 (28%)
Partially completed	13 (<0.5%)	5 (1%)	32 (1%)	1 (<0.5%)
Completed paper booklet	15 (<0.5%)	6 (1%)	35 (1%)	1 (<0.5%)
Questions read out by interviewer	173 (4%)	23 (6%)	225 (4%)	43 (9%)
Refused to complete	55 (1%)	24 (6%)	51 (1%)	23 (5%)

Note: Sample 1 = 18 sectors in stratum A where full screen done with Black African, Black Caribbean, Indian and Pakistani; Sample 2 = 54 sectors in stratum A where full screen done only with Black African and Pakistani only; Sample 3 = all 78 sectors in stratum B where full screen done for Black African, Black Caribbean, Indian and Pakistan at sampled addresses, and focused enumeration for these groups at two addresses on either side.

### 7.3.2 Ethnicity and country of origin

For the purposes of the comparative analyses across ethnic groups in this chapter, only White, Black Caribbean, Black African, Indian and Pakistani ethnicity respondents are presented. Re-allocation of ethnicity of respondents was possible (for example, individuals who self-identified as Black Other to Black Caribbean or Black African ethnicity if they reported birth in the Caribbean or on the African Continent respectively). However this was not done in order to maintain and respect respondents own ethnic allocation. 217 men and 301 women identified themselves as being of 'Other' ethnicity and were excluded for the purposes of this study.

Table 7-1 (page 198) and Table 7-2 (page 198) show the distribution of the entire Natsal 2000 sample (main + EMB) by ethnicity and country of birth, for men and women respectively. The majority (>94%) of White respondents were born in the United Kingdom, with just over 3% being born in Ireland or other European countries. Over three-quarters of Black Caribbean men and women were born in the United Kingdom. In contrast, the majority of Black Africans were born outside of the United Kingdom (only 30% of men and 28% of women reported United Kingdom birth), with West and East/ Central Africa being the most commonly reported regions of origin. Among Pakistanis, 59% of men and 63% of women were born in the United Kingdom compared with just under 50% of Indian men and 57% of Indian women. 16% of Indian men and 20% of Indian women were born in Africa.



### **7.3.3 Demographic characteristics**

Significant differences in the demographic characteristics of the five main ethnic groups (with respect to age, region of residence, marital status and among men, social class) were observed and are summarised in Table 7-3 and Table 7-4 (page 199) for men and women respectively. Black Caribbean, Indian and Pakistani respondents (male and female) were generally younger as compared with the White ethnic majority. Black African respondents were generally older than Whites.

Among men (Table 7-3, page 199), nearly a third or more of Black Caribbeans, Indians and half of Pakistanis were in the 16-24 year age group compared with just over a quarter of Whites and Black Africans ( $p=0.0001$ ). Higher proportions of Black Caribbean (45%) and Black African (68.5%) men resided in Greater London compared with all other groups ( $p<0.001$ ). Over half of Indian and Pakistani men reported being married, compared with a just under a third (30.5%) of Black Caribbean men. Cohabiting was relatively uncommon among Indians (1.7%) and Pakistanis (3.7%), ( $p<0.001$ ).

Significant differences in social class across ethnic groups were observed among men only (Table 7-3, page 199). Approximately half of Black African and Indian men were found in social classes I & II ( $p=0.0008$ ). Higher proportions of Black Caribbean (56.3%) and Pakistani (53.1%) men were in social class III (manual and non-manual) compared with only a third Black African and Indian men.

Black African men were the most highly qualified, with just under a half (44.4%) having attained a university degree. Black Caribbean men (10.1%) were the least likely to have attained a university degree. Over one in five Pakistani and Black Caribbean men stated that they had no educational qualifications.

Among women, (Table 7-4, page 199) broadly similar ethnic differences were observed for some demographic characteristics including age ( $p<0.0001$ ), region of residence ( $p<0.0001$ ) and marital status ( $p<0.0001$ ). However, in contrast to the men, no significant differences in social class distribution were observed across ethnic groups ( $p=0.226$ ). Roughly one in three

women from all ethnic groups were found in social class I or II, and just under one in two were found in social class III (manual and non-manual). Black African and Indian women were among the most highly educated and were the least likely to report having no educational qualifications.

#### **7.3.4 Sexual behaviour – lifetime and recent partnerships**

Table 7-5 (page 200) shows the distribution of numbers of heterosexual partners reported in respondents' lifetime and in the past five years, by gender and ethnic group. In general, within each ethnic group, men consistently reported higher numbers of lifetime and five-year partnerships than women. Significant heterogeneity was observed across ethnic groups, although this was somewhat more marked for women compared with men.

The mean (standard deviation) of lifetime reported sexual partners for men (all ethnic groups) was 12.7 (35.2). Black Caribbean (mean 23.9, SD 72.4) and Black African (14.0, SD 43.9) men reported a significantly higher number of lifetime partnerships than all other ethnic groups, whilst Indian (5.2, SD 9.4) and Pakistani (7.4, SD 27.2) men reported fewer. Significant differences in the partnership distribution across ethnic groups were found. Whereas just over a third (35.0%) of White males reported having 10 or more lifetime partners, reported partnerships were higher among Black Caribbean (41.6%) and Black African (41.2%) males and lower among Indian (14.5%) and Pakistani (16.9%) men. Broadly similar patterns in the distribution of partnerships in the past five years were observed with Black African and Black Caribbean men reporting substantially higher mean and median numbers of partnerships than other ethnic groups.

Patterns of partnership distribution among women differed markedly compared with men (Table 7-5, page 200). In general, White and Black Caribbean women reported higher numbers of lifetime and five year partnerships than other ethnic groups. 20.1% of White, 15.3% of Black Caribbean and 12.1% of Black African women reported having 10 or more lifetime partners, substantially higher than the proportion of Indian (5.9%) and Pakistani (0.6%) women. White (3.7%) and Black Caribbean (2.6%) women were also more likely to

report having 10 or more partnerships in the last five years compared with all other ethnic groups. Compared with men, there appeared to be greater variation in reported partnerships across ethnic groups - mediated largely by the substantially lower numbers of partnerships reported by Pakistani women.

### **7.3.5 Nature of high-risk sexual partnerships**

The distribution of sexual behaviours related to partner acquisition, concurrency, and sexual partnerships with partners from overseas, across ethnic groups are illustrated in Table 7-6 (page 201) and Table 7-7 (page 202) for men and women respectively.

Overall 31.2% of men reported having any new partner (heterosexual or homosexual) in the past year. A higher proportion of Black Caribbean (41.6%) and Black African (43.8%) men reported having at least one new heterosexual partner in the past year compared with all other ethnic groups. Indeed, fewer than one in four Indian and Pakistani men reported having acquired a new sexual partner in this period. The reported mean (standard deviation) number of new sexual partners in the last year was lowest among Indian men (mean 0.44, SD 1.17) and highest among Black Caribbean men (mean 1.08, SD 1.91). Within each ethnic group, substantial variations in reported partner acquisition were observed by marital status, with single men reporting more mean partners than those who were married (Table 7-6, page 201).

Overall, 56.7% of all men reported having first sexual intercourse within one month of meeting their most recent partner, however this did not differ significantly across ethnic groups.

Concurrent sexual partnerships in the last relationship<sup>vii</sup> were reported by 14.6% of all men, however were highest among Black Caribbean (25.4%) men compared to 13.9% of White and 13.2% of Pakistani men (Table 7-6). Overall, 14.0% of men reported having had a new sexual partner from outside the United Kingdom in the past five years. This varied significantly across ethnic groups, ranging between 13.0% of Indian men to 33.2% of Black African men (Table 7-6).

Among women, fewer differences were observed across ethnic groups in reported high-risk sexual behaviours (Table 7-7, page 202). Overall, 21.4% of women reported having at least one new sexual partner (heterosexual or homosexual) in the last year. Fewer Pakistani (8.9%) women reported new heterosexual partnerships than other groups. The mean (standard deviation) numbers of new sexual partners in the past year varied between 0.09 (0.31) for Pakistani women, to 0.42 (2.11) Black Caribbean women. In general, single women of all ethnic groups reported higher mean (SD) number of new sexual partners in the past year compared with those who were married, separated or cohabiting.

43.9% of White women reported having first sexual intercourse within a month of meeting their most recent partner, substantially higher than all other ethnic groups.

9.0% of all women reported having a concurrent sexual partnership (see definition above) in the last year. This was highest among White (8.8%, 95%CI 7.9-9.9) and Indian women (8.8%, 95%CI 2.3-28.3) and lowest among Pakistani women (1.6%, 95%CI 0.4-5.4).

Overall, 7.1% of women reported having had sexual intercourse with a new sexual partner from outside the United Kingdom in the past five years. However, significant variations across ethnic groups were observed. Black Caribbean women (18.1%) were most likely to

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<sup>vii</sup> Partnerships were considered concurrent if the month and year of first sex with the more recent partner was prior to the month and year of last sex with the former partner. For those respondents unable to provide both date components but the partnerships did not occur in the same year, then concurrency was assumed not to be possible. For the remaining respondents who had at least 2 partners in the year prior to interview, then these partners are assumed to be distributed between the serial monogamous and concurrent categories with equal probabilities to those whose dates are known.

report having had a partner from overseas in the past 5 years, although 11.0% of Pakistani and 9.5% of Indian women also reported having done so.

### **7.3.6 Patterns of sexual mixing**

Table 7-8 a) and b) (page 203) show patterns of sexual mixing between ethnic groups for women and men respectively. These data, on the ethnicity of the current sexual partner, were obtained from respondents who were cohabiting or married at the time of interview.

Among women, assortative (within ethnic group) sexual mixing was highest among White (99.1%) and Pakistani (94.6%) women and less so among Black Caribbean (51.6%) and Indian (78.9%). Among men, assortative partnerships were highest among white males (99.5%) and least among Black Caribbean men (36.6%). Few ethnic groups reported having Pakistani partners, and members from all ethnic minority groups reported having White partners. No Pakistanis or Indians reported having Black African or Black Caribbean partners although the converse was not entirely true.

Further exploration of the degree of ethnically assortative mixing was undertaken after stratifying by age group (under 30 versus 30+ years) and United Kingdom birth. Individuals aged under 30 years were generally less likely to have ethnically assortative partnerships compared to those over 30 - a notable exception being Indian women (96.0% cf. 80.8%). In other words, younger age was associated with greater ethnic diversity in partnerships. Mixing was highly assortative, irrespective of United Kingdom birth, among White men and women, among other ethnic groups. In contrast, women of the other ethnic groups born in the United Kingdom were generally *less* or equally likely to have assortative partnerships than those born outside of the United Kingdom. The converse was observed for men – those born in the United Kingdom were generally more likely to have ethnically assortative partnerships compared to those outside. Black Caribbean men (31.5%) and women (65.2%) born in the United Kingdom were significantly less likely to have assortative relationships than those born outside the United Kingdom (58.4% and 92.2% respectively).

### **7.3.7 The distribution of adverse sexual and reproductive health outcomes across ethnic groups**

A number of indicators of adverse sexual and reproductive health outcomes were explored. These include the age at first intercourse, the proportion of individuals reporting sexual debut before 16 years of age, reported contraception use at first intercourse, teenage parenthood (under 18 years), GUM attendance, STI diagnosis and HIV testing. The outcomes were reported separately for men and women in Table 7-9 (page 205) and Table 7-10 (page 206) respectively.

#### **Men**

Among men, statistically significant differences were observed across all five ethnic groups for nearly all of the selected outcomes, with a higher proportion of Black Caribbean and Black African men reporting had adverse outcomes compared with Indian and Pakistani men (Table 7-9). Median age of sexual debut ranged from 15 years among Black Caribbean men to 20 years among Indian and Pakistani men. Statistically significant differences were observed across ethnic groups in the proportion reporting sexual debut before 16 years, ranging between 10.3% of Indian men to 56.3% of Black Caribbean men. Overall 22% of men used no contraception at first intercourse, with significant variations across the ethnic groups ( $p < 0.0001$ ), ranging from 22.0% of White men to 47.2% of Pakistani men. Focusing specifically on condom use at first intercourse however, there were no significant differences across the ethnic groups ( $p = 0.1902$ ) (Table 7-9). 3.9% of Black Caribbean men reported fathering a child before 18 years of age, significantly higher than all other ethnic groups ( $p = 0.034$ ).

Highly significant differences were observed across ethnic groups in other sexual health outcomes including GUM clinic attendance ( $p < 0.0001$ ), STI diagnosis ( $p = 0.0005$ ), and HIV testing ( $p < 0.0001$ ). Higher proportions of Black Caribbean and Black African men reported these adverse outcomes compared to all other ethnic groups (Table 7-9). Pakistani men were least likely to report these outcomes. Reported GUM attendance (ever) was highest among Black Caribbean (28.0%) and Black African (25.8%) men and substantially

lower among Indian (6.0%) and Pakistani (4.1%) men. 19.7% of Black Caribbean and 16.2% of Black African men reported ever having been diagnosed with an STI, compared with only 3.4% of Indian and 3.2% of Pakistani men. Finally, more Black African men (35.4%) reported ever having had an HIV test than all other ethnic groups (Table 7-9).

### **Women**

In general, fewer Indian and Pakistani women reported adverse sexual health outcomes compared with women from other ethnic backgrounds. Despite the relatively higher rates of partner acquisition and concurrency among White females, they were also less likely to report lifetime GUM attendance, STI diagnosis or HIV testing than Black Caribbean or Black African women.

As with men, significant differences across ethnic groups were in reported the median age at first intercourse and in the proportion reporting sexual debut before 16 years of age ( $p<0.0001$ ). Reported sex before 16 years was highest among White women (22.0%) and lowest among Indian (1.0%) and Pakistani (2.9%) women. Reported non-use of contraception at first intercourse was lowest among Indian women (27.7%) and highest among Black African (52.2%) and Pakistani (54.5%) women. Black Caribbean women (12.8%) were the group most likely to report having a child before 18 years of age, compared with 4.8% of White, 4.4% of Black African, 2.5% of Pakistani and 0.5% of Indian women (Table 7-10).

Fewer Pakistani women (4.3%) were reported having had a termination of pregnancy, compared with Black African (38.8%), Black Caribbean (25.4%) and White (16.7%) women ( $p<0.0001$ ). Compared to all other ethnic groups, higher proportions of Black Caribbean and Black African women reported GUM clinic attendance (38.5% and 17.5% respectively); ever being diagnosed with an STI (22.7% and 14.1% respectively); and ever having had an HIV test (20.6% and 42.3% respectively) (Table 7-10).

### **7.3.8 Ethnicity and STI acquisition risk**

Table 7-11 (page 207) and Table 7-12 (page 208) present the frequency, odds and adjusted odds ratios (95% confidence limits) for the factors associated with recent STI acquisition for men and women respectively. Overall, 3% of men and 4% of women reported having an acute STI in the past five years. STI acquisition was significantly associated with age, region of residence (women only), marital status, and ethnicity. It was also associated with a range of behaviours in the past 5 years including, numbers of sexual partners, homosexual partnerships, injecting drugs (women only), paying for sex (men only) and having a sexual partner from abroad. There was no association between social class and the risk of STI acquisition.

Ethnicity was strongly associated with STI acquisition and marked variations in reported STIs were observed across ethnic groups. 7.6% of Black Caribbean men and 7.8% of Black African men reported having had an STI in the past five years compared with 2.8% White, 0.5% Indian and 1.6% Pakistani men (Table 7-11). The proportion of Black Caribbean men diagnosed with an STI in the past 5 years was just below that observed for men reporting homosexual partnerships (10.5%), 10+ sexual partners (11.9%), and paying for sex (9.7%) in the past five years.

Adjusting for key demographic and behavioural risk factors (including social class) resulted in a reduction of the OR from 2.80 (95%CI 1.27 – 6.17) to 2.59 (95%CI 1.01-6.63), but did not eliminate the association for Black Caribbean men. The association for Black African men also remained significant (adjusted OR 2.98, 95%CI 1.27 – 6.99).

Among women (Table 7-12), a higher proportion of Black Caribbean and Black African women reported having had an STI in the past five years compared with other ethnic groups. Compared with White women, Black Caribbean women were more likely to report being diagnosed with an STI (OR 2.29, 95%CI 1.29-4.08). Adjustment for key demographic and behavioural variables in the multiple logistic regression model resulted in little change in the magnitude of association for Black Caribbean (adjusted OR 2.66, 95%CI 1.43 – 4.95) and Black African (adjusted OR 3.51, 95%CI 1.46 – 8.41) women.



## 7.4 DISCUSSION

In this probability sample survey of sexual attitudes and lifestyles, we have demonstrated significant variations across ethnic groups in the patterns and distributions of high-risk sexual behaviours, and in the prevalence of reported sexual and reproductive health outcomes.

### Box 22. Summary of key socio-demographic characteristics of the main ethnic minority groups in Natsal 2000

Compared with the white ethnic majority (>94%) of whom are United Kingdom born:

#### Black Caribbeans:

- a) Significant majority now born in Britain some in-migration (<20%) still occurring
- b) Relatively youthful population compared with White majority, and more likely to be single than all other ethnic groups
- c) Population clustered in London (60% of women and 40% of men)
- d) Significant gender disparities in social class with one in three women and one in five men being in Social class I&II.
- e) Men have lower educational attainment compared to ethnic majority, women similar. Significant gender disparity in educational attainment with one in five Black Caribbean women having degree, compared with one in 20 men.

#### Black Africans:

- a) More recently arrived migrant population with the lowest proportion of individuals being born in the United Kingdom (34% of men and 26% of women)
- b) Slightly older male population compared with ethnic majority
- c) Highly clustered in London (76% of men and 92% of women)
- d) More likely to be either married or separated/ widowed or divorced than all other ethnic groups
- e) Higher proportions of men in social class I and II than other groups
- f) Highest levels of educational attainment (one in two men and one in three women have a degree)

#### Indians:

- a) Approximately half born in United Kingdom
- b) A somewhat youthful population compared with the White majority
- c) Although over-represented in London compared to Whites, substantially more likely to be resident outside of London than Black Caribbean and Black African ethnic groups.
- d) Least likely to cohabit than other groups, higher proportions also married
- e) Similar social class distribution to White majority
- f) Generally higher levels of educational attainment compared to White majority

#### Pakistanis:

- a) The majority (over 70%) now United Kingdom born
- b) Somewhat more youthful distribution than ethnic majority
- c) Substantially more likely to be found outside of London than other ethnic minorities
- d) As with Indians, least likely to report cohabiting, and more likely than ethnic majority to be married
- e) Lower social class attainment than other groups. More likely to be found in Social class III than other groups
- f) Broadly similar educational attainment to White majority

### **7.4.1 Understanding the context**

The data confirm the underlying differences in the socio-demographic characteristics of Britain's ethnic minorities, many of which may place them at increased STI transmission risk (summarised in Box 22, page 186). The United Kingdom's ethnic minority communities are no longer comprised solely of recently arrived migrants, and for some groups, particularly Black Caribbeans and Pakistanis, the majority of young sexually active adults have been born and raised here. Although in-migration among these groups has largely diminished, in their place, new communities e.g. Black Africans continue to arrive.

Black Africans in Britain are unique, with their high levels of educational attainment combined with high levels of unemployment and social deprivation. Other studies have confirmed that Black Africans are more likely to live in overcrowded conditions, are less likely to own their own homes and are more likely to receive welfare support compared with other ethnic groups. This may reflect the fact that, unlike Indian communities, the African in-migration has been largely driven through political conflict and economic instability, rather than through purposive migration to fill highly or semi-skilled labour shortages around Britain. As migration generally favours the young, healthy, more highly educated and single individuals, it is unsurprising that this demographic profile is, in part, reflected in our sample of migrant Africans.

Finally, ethnic minorities are not randomly distributed throughout Britain. The highly clustered distribution of Black African and Black Caribbean communities in Greater London observed in Natsal 2000 is confirmed in national census and general population probability sample surveys.

### **7.4.2 Ethnic variations in high-risk sexual behaviour**

Among the most striking findings was the consistently lower behavioural risk reported by Indian and Pakistani communities. These ethnic groups reported substantially lower numbers of lifetime and recent sexual partners, and lower prevalence of high-risk sexual behaviours including concurrency, rates of partner change, paying for sex and time to sexual

intercourse in a new relationship. These findings confirm those of other clinic-based studies and help to explain the lowered STI risk observed in surveillance data. Although a substantial proportion of Pakistanis report having a new sexual partner from outside the United Kingdom, this may be associated with the practice of arranged marriages and may not necessarily present an opportunity for increased STI transmission, given the social mores regarding sexual relations outside of marriage.

In contrast, substantially higher prevalences of high-risk behaviours were observed among Black Caribbean and Black African communities, particularly among men, compared to all other ethnic groups. Among men from these communities, the higher behavioural risk was observed in relation to the earlier coitarche, higher numbers of reported partners, rates of partner acquisition, and concurrency - all prime determinants of STI transmission. Substantial gender disparities in reported sexual behaviours were identified particularly among African communities.

Given the variations in socio-demographic and behavioural characteristics across the study communities, it is unsurprising that marked differences were the prevalence of adverse sexual and reproductive health outcomes were observed. The lowest rates of reported STIs, HIV testing, termination of pregnancy, and early parenthood were reported by Indian and Pakistani groups compared to others.

### **7.4.3 Gender and behavioural risk**

Natsal 2000 revealed the existence of substantial gender differences in the patterns of reported risk behaviours across all ethnic groups, however the magnitude of the differences varied across ethnic groups. Table 7-15 (page 211) summarises some of the key behavioural indicators to illustrate the nature and magnitude of gender differences across the ethnic groups. In general, with the exception of Indian men, men from all other ethnic groups were significantly more likely than women to report having a new sexual partner in the past year. They were also significantly more likely than women to report having concurrent sexual partnerships in the past year. Statistically significant gender disparities occurred for a wider

rage of parameters (partner acquisition in last year; condom use at last intercourse; STI diagnosis; concurrency in last year; new sex partner abroad in last five years) among Whites, than other ethnic groups. Indian men and women showed the least differences.

Similar gender disparities were observed and documented in the ExES study (Elam, Fenton, Johnson, Nazroo, & Ritchie 1999). They were thought to reflect different patterns of sexual socialisation, community norms and opportunities for experimentation for men and women within each group.

#### **7.4.4 Acculturation and behavioural risk**

Comparison of data between the 1990 and 2000 Natsal surveys suggest substantial changes in sexual attitudes and lifestyles in the (predominantly white) British population, including increases in reported number of heterosexual partners ever and in the last five years; homosexual partnerships ever in the last five years; concurrent partnerships; oro-genital contact and heterosexual anal sex in the last year; and consistent condom use in the last four weeks. For men there was an increase in reporting paying for sex in the last five years. Some of the most substantial changes have occurred in: the lifetime reported heterosexual partnerships for women; homosexual partnerships in the last five years for women; and in the reporting of heterosexual anal intercourse in the last year by both men and women. The findings suggest a tendency within British society towards earlier sexual debut, increasing sexual partnerships and greater sexual diversity.

The impact of these wider societal trends on the cultural norms and values of Britain's ethnic minorities (acculturation) is therefore of particular interest. Natsal 2000 enabled the exploration of changing sexual behaviour and attitudes across successive birth cohorts within each ethnic group, and consequently, the ability to explore the impact of acculturation. This was achieved by examining the reporting of fixed events (e.g. age at first intercourse) in successive birth cohorts for each ethnic group.

Table 7-16 (page 212) and Table 7-17 (page 213) show changes in the proportion of successive birth cohorts reporting sex before 16 years and homosexual experience, by

country of birth for men and women respectively. The tables confirm the significant and increasing odds of United Kingdom birth among individuals aged 35-44, 25-34, and 16-24 years in men and women – the effect being most marked among Indian and Pakistanis and least among Black African communities.

Among British-born respondents, general increasing trends in the odds of reporting sex before 16 years across the three age-group bandings were observed, consistent with the previously described reductions in the median age at first intercourse in Britain.

Among those born outside the United Kingdom, there was some suggestion of increasing odds of reporting sex before 16 years with decreasing age, particularly among Black African men (Table 7-16). Although not statistically significant, among men born outside the United Kingdom, there was some suggestion of increases in the proportion reporting a homosexual partnership (ever) in the 16-24 year compared to the 35-44 year age-cohorts among Black Caribbean (OR 14.29, 95%CI 0.61-332.10) and Black African (OR 4.04, 95%CI 0.22-74.14) men. This may reflect differential in-migration, or increasing willingness to report these behaviours among successive generations of these communities. Similar non-significant trends were also observed for Black Caribbean and Black African women born outside the United Kingdom. However, caution in interpreting these findings is recommended due to the small numbers of observations (and wide confidence limits).

## **7.5 LIMITATIONS OF THIS STUDY**

The Natsal 2000 ethnic minority boost (EMB) greatly enhanced our understanding of the sexual health of ethnic minorities, and its determinants. Key limitations of this study are discussed in detail below.

### **7.5.1 Sampling procedures**

Despite the EMB, we were only able to focus our efforts on four broad ethnic minority groups: Africans, Black Caribbeans, Indians and Pakistanis. The sample size for the ethnic

minority boost sample was calculated on the assumption that these ethnicities represented fairly homogenous groupings – essentially ignoring the tremendous ethnic and cultural diversities within each of these main categories. This was particularly unsatisfactory for the Black African category, which included representatives from many African countries and tribal groups. Results from the MAYISHA study in Chapter 5, highlighted the significant variations between national groups in migration history, demographic characteristics and behavioural risk. Care should therefore be taken in the degree to which the results are applied to any one group.

### 7.5.2 Data consistency

A major part of the data preparation process in Natsal involved checking the data for internal consistency between responses to different questions. With CASI, this was achieved by building in consistency checks within the programme so that respondents could rectify any problems immediately. A programme-checking for inconsistencies was carried out during the data cleaning stage. In all, 137 potential inconsistencies were checked for each respondent. Box 23 shows the number of consistencies identified for both the main survey and the EMB samples, prior to any editing taking place.

**Box 23. Number of consistency checks triggered, Natsal 2000 main and EMB samples by gender**

Number of consistency checks	Men		Women	
	<i>Main</i>	<i>EMB</i>	<i>Main</i>	<i>EMB</i>
None	3245 (68%)	240 (59%)	4386 (69%)	313 (58%)
One	856 (18%)	83 (20%)	1163 (18%)	118 (22%)
Two	496 (10%)	58 (14%)	696 (11%)	73 (13%)
Four or more	165 (3%)	25 (6%)	154 (2%)	39 (7%)

About a third of the main sample registered an inconsistency although the majority only triggered one. In contrast, for the EMB, the percentage triggering an inconsistency was slightly higher (42%) with half of these triggering one check. Men and women had similar rates of consistency check failures (see Box 23).

The highest number of inconsistencies had to do with condom use (with respondents saying that condoms had not been used in the last year, but then reporting condom use with a specific partner); and reporting of homosexual experience (with respondents more likely to report in the self-completion than in the face-to-face interview). Respondents who were less familiar with using a computer were more likely to trigger consistency checks.

### **7.5.3 Survey non-response and representativeness**

Achieving good response rates in sex survey research is essential to improve the representativeness of the survey and reduce participation bias. Obtaining a representative sample increases our ability to make robust inferences about the source population, that is, to generalise survey findings. Generally, between 25-35% of people refuse to engage in telephone or face-to-face interviews designed to investigate sexual attitudes and lifestyles, and non-return rates of 40% in postal surveys of this nature are common (Dunne *et al.* 1997).

Reasons for non-participation vary, but include non-contact with selected addressees, refusals in person or by proxy, or respondents being ill or unable to speak the appropriate language. Methods that rely on high levels of literacy may also exclude groups particularly vulnerable to poor sexual health outcomes. Refusal to participate may occur at any stage of the interview, but is most likely at the point of initial contact or invitation (Catania *et al.* 1995).

In the National AIDS Behavioural Survey, over 80% of refusals occurred before respondents heard that the survey concerned AIDS-related issues (Catania *et al.* 1992). The response rate to the main survey of 65%, and the EMB of 62.9% using CASRO rules is consistent with studies of this nature. In the EMB, 25% of eligible respondents refused the interview and in a further 8%, no contact was made with the selected person. We are unable to examine response rates by ethnic group, however previous experience has shown that item-non-response to sensitive questions is likely to be greater among some ethnic minority groups.

#### **7.5.4 Participation bias**

Participation bias describes errors arising from systematic differences in the characteristics (e.g. sexual behaviour) of those who agree to participate in a study compared with those who do not. Participation bias has been documented in a variety of sexual behaviour studies, and is associated with the respondents' characteristics (e.g. gender, age, social class), beliefs and sexual behaviour (Fenton *et al.* 2001f). Clement (1990) argues that the more intrusive a survey, the higher the barrier to intimacy, and the more likely we are to encounter participation bias that overestimates variability and frequency of sexual behaviour (since those with conservative or normative lifestyles are less likely to participate).

Item response bias is another type of participation bias in which respondents refusing to answer a particular question(s) are systematically more or less likely to have experience of the relevant behaviour. Copas *et al.* (1997) found older age, problems of comprehension and ethnicity to be associated with refusal to complete more detailed and sensitive questions contained in a self-completion booklet in Natsal 1990, but concluded that those who declined to answer the more intimate questions were, if anything, likely to be at lower HIV risk. Box 20 confirms that EMB respondents were more likely to refuse to complete the questionnaire compared with the main survey respondents. Further investigation in this study is warranted (Horner, Oddone, & Matchar 1995; Strassberg & Lowe 1995).

#### **7.5.5 Reporting and recall bias**

Since sexual behaviour is most commonly studied using self-reported recall of behaviours across some retrospective time frame, problems with recall can distort the reported incidence and frequency of specific behaviours (Anderson & Broffitt 1988; Catania *et al.* 1990b; Catania, Binson, Van der Straten, & Stone 1995; Delamater 1974; James, Bignell, & Gillies 1991). Studies have found that the reliability of self-reported sexual behaviour varies by a range of factors including age (Capaldi 199; Clark *et al.* 1997; McFarlane & St Lawrence 1999; McFarlane & St. Lawrence 1999), ethnicity (Rogers 1982), the number of sexual partners (Catania, Gibson, Chitwood, & Coates 1990b), and the time frame for recall (Catania *et al.* 1990). *Incidence reports* (e.g. first sexual intercourse) are generally more



reliably reported than *frequency reports* (e.g. number of partners, frequency of sex). The reliability of frequency reports decreases with longer recall periods and more frequent behaviours (e.g. vaginal sex), (Bellak & Herson 1977;McFarlane & St Lawrence 1999;Reading 1983;Saltzman *et al.* 1987). Other reliability studies have found that recall of the number of partners tended to be less variable than the number of acts (Becker & Begum 1994;Jeannin *et al.* 1998;Van Duynhoven, Nagelkerke, & Van De Laar 1999). In general, longer recall intervals result in either under-reporting or inaccurate recall of sexual practices and partners, because a more elaborate reconstruction of events rather than a simple scanning of more recent events is required (Blake *et al.* 1992;Coates *et al.* 1986;Kauth, St.Lawrence, & Kelly 1991).

Gender related bias in self-reported behaviours may also occur. In a closed population with a balanced gender ratio, men and women should report the same population mean number of partners over a defined period. However, men consistently report a higher mean number of partners in nearly all surveys (Catania *et al.* 1996). Wadsworth *et al.*(1996) explored this relationship in data from Natsal 1990 and concluded that the discrepancy could be reduced but not eliminated by accounting for age mixing in partnership formation, under-representation of prostitutes, and modest assumptions about response bias introduced by lower response rates amongst men than women.

Similarly, evidence from other surveys indicate that men and women may differ in what they count as 'sex', with men more likely to include non-penetrative sex than women (Jeannin, Konings, Dubois-Arber, Landert, & Van Melle 1998;Sanders & Reinisch 1999). However, it is likely that there remains some social desirability bias in the direction of over-reporting by men and/or under-reporting by women.

## **7.6 PUBLIC HEALTH AND POLICY IMPLICATIONS**

The findings of this study are highly relevant to those working in STI surveillance, and sexual health promotion and policy.

### **7.6.1 Implications for STI surveillance**

These population-based data confirm the existence of substantial variations in adverse sexual health outcomes, including STI diagnosis and HIV testing, across ethnic groups in Britain. Some of these findings have been described from existing surveillance data. As discussed in Chapter 3, surveillance data from GUM clinics are dependent upon patterns of health-care access and utilisation, and therefore tend to underestimate the true burden of disease in any setting. The restricted range of demographic and behavioural variables collected routinely further limits STI surveillance data in Britain.

Natsal 2000 provided additional information on the distribution of reported STIs and other adverse outcomes across ethnic groups in Britain; and their associated socio-demographic and behavioural factors. The data confirm the limited surveillance findings of higher STI rates among Black Caribbean and Black African communities compared to other ethnic groups. The data also suggest that these communities have higher rates of access to GUM services, which may reflect higher awareness and acceptability of these services as identified in the community-based qualitative study in Chapter 4. Alternatively, the higher reported rates of GUM attendance may reflect greater disease burden in the community, for which population-based STI prevalence studies will be required to understand.

The data also help to explain why Asian communities in Britain are likely to be under-represented in STI/HIV surveillance statistics. The consistently lower behavioural risk profiles compared with other ethnic groups suggest a relative protection from adverse sexual health outcomes. The highly assortative mixing within these communities will also reduce the chance of mixing with communities with high STI prevalence. Nevertheless, acculturation, schooling and socialisation in Britain, and the decline of religious influences place continued pressures on these protective cultural norms. STI surveillance programmes must continue to be vigilant in order to detect early increases in disease incidence in these groups.

Finally, HIV/STI surveillance data suggest that a not insubstantial proportion of STIs may have been acquired abroad. This is most apparent for HIV infection, where up to 70% of

heterosexually acquired infections are thought to have been acquired among individuals infected abroad prior to migration to the United Kingdom. However, similar connections to other high STI prevalence countries have been documented for syphilis and gonorrhoea infections. The Natsal 2000 data suggest that Britain's ethnic minorities may be at higher risk, as many chose partners from their own ethnic backgrounds, some of whom may be resident in, or recently arrived from, their countries of origin, where HIV/STI prevalence is high. Tremendous variations in this practice exist between ethnic groups, although it appears to be more common among Pakistani, Black Caribbean and Black African groups compared with White populations. Indeed, examination of the Black Caribbean group suggests that this behaviour may be relevant even among second and third generation migrants.

### **7.6.2 Implications for sexual health promotion and policy**

The presented data also provide an opportunity for reviewing and enhancing STI prevention interventions. Intensive, targeted prevention interventions with those at increased risk, including homosexual men, those with high rates of sexual partner change, and those having new sexual partnerships with partners from overseas must be maintained. The data presented in this chapter suggest ways in which such interventions could be refined for specific ethnic groups. For example, the high rates of partner acquisition and concurrency reported by Black Caribbean and Black African men, may be culturally prescribed, however undoubtedly contribute to their increased risk of adverse outcomes. Similarly, earlier sexual debut among these groups, associated with poor contraceptive use may be contributing to poor reproductive health outcomes. In both communities, culturally competent interventions targeted at delaying coitarche, increasing condom use and reducing partner concurrency and partner change rates should form the basis of effective evidence-based safer sex promotion. Understanding and promoting factors, which may be contributing to the overall reduced risk of STIs, may form part of a targeted prevention strategy.

The government's Sexual Health and HIV strategy (Department of Health 2001) is committed to tackling variations in sexual health outcomes and has identified a range of interventions aimed at improving the sexual health of Black and ethnic minority groups. The

results from this study provide ample justification for this approach. The finding that one in five Black Caribbean men had attended a GUM clinic and one in ten reported a previous STI diagnosis remains of concern. The data also suggest the futility of targeting STI prevention interventions (including STI screening programmes) solely at women, since their STI acquisition risk is less likely to be determined by their own sexual behaviour than by that of their sexual partner. Gender specific interventions with men remain a relatively undeveloped area in sexual health promotion and should form an area for investment, particularly with Black Caribbean and Black African communities.

## **7.7 CONCLUSIONS**

Natsal 2000 has provided new insights into the relationship between ethnicity and sexual health outcomes in Britain. It confirmed the existence of marked variations in socio-demographic characteristics, access to sexual health services, high-risk sexual behaviour, and a range of adverse sexual and reproductive health outcomes across Britain's ethnic minority communities. Within these differences however, there were similarities including highly assortative sexual mixing; gender disparities in reported behavioural risk and outcomes; the contribution and impact of travel and continued in-migration; and the role of acculturation. The findings helped to identify areas for prioritising sexual health promotion interventions within each ethnic group.

Table 7-1. Demographic Characteristics of Men

**Table 7-1. Distribution of self-reported ethnicity by country of birth, MEN. Natsal 2000**

Region/Country of Birth	self-reported ethnicity (%)					
	White	Black Caribbean	Black African	Indian	Pakistani	Other
Base (unweighted/weighted)	4237, 5607	194, 108	203, 75	169, 110	176, 57	155, 174
Europe						
United Kingdom	94.4	78.2	36.3	51.3	56.5	38.5
Ireland	1.0	0.0	0.0	0.2	0.0	3.0
Other Europe	2.3	1.2	1.6	0.0	0.0	6.1
Caribbean	0.0	19.3	0.4	0.0	0.0	0.0
African Continent						
North	0.2	0.0	1.6	0.2	0.0	11.0
East/central	0.3	0.0	21.2	13.9	0.0	3.4
West	0.0	0.3	36.1	1.0	1.4	0.8
South	0.4	0.0	0.5	1.0	0.0	2.0
India	0.0	0.0	0.0	29.5	0.0	0.0
Pakistan	0.0	0.0	0.0	0.0	39.7	0.0
Other	1.4	1.1	2.3	2.9	2.5	35.3
TOTAL	100.0	100.1	100.0	100.0	100.1	100.1

Base excludes those missing either for the ethnicity variable or the 'BornIn' variable

**Table 7-2. Distribution of self-reported ethnicity by country of birth, WOMEN. Natsal 2000**

Region/Country of Birth	self-reported ethnicity (%)					
	White	Black Caribbean	Black African	Indian	Pakistani	Other
Base (unweighted/weighted)	5695, 5433	354, 117	265, 63	222, 115	186, 54	185, 142
Europe						
United Kingdom	94.2	82.5	27.7	53.5	63.6	37.4
Ireland	1.1	0.0	0.0	0.0	0.0	0.4
Other Europe	2.7	0.1	1.3	0.0	1.1	8.7
Caribbean	0.0	15.3	0.0	0.2	0.0	0.0
African Continent						
North	0.2	0.0	0.0	0.1	0.5	7.0
East/central	0.2	0.0	30.2	18.9	0.9	6.3
West	0.0	0.8	37.0	0.7	0.0	0.2
South	0.3	0.0	3.4	0.8	0.0	0.0
India	0.0	0.0	0.0	20.0	0.0	0.0
Pakistan	0.0	0.0	0.0	0.0	33.7	0.0
Other	1.4	1.4	0.5	5.8	0.2	40.0
TOTAL	100.1	100.1	100.1	100.0	100.0	100.1

Base excludes those missing either for the ethnicity variable or the 'BornIn' variable

**Table 7-3. Demographic characteristics, MEN. Natsal 2000**

Region/Country of birth	self-reported ethnicity (%)					Chi-square statistic (& p-value)
	White	Black Caribbean	Black African	Indian	Pakistani	
Base (Unweighted/Weighted)	4238, 5608	196, 108	207, 76	171, 112	197, 57	
Age						25.6404 (.0002)
16-24	25.8	34.9	28.7	36.0	48.9	
25-34	37.9	25.0	35.7	37.0	26.9	
35-44	36.3	40.1	35.6	27.0	24.2	
Region						282.8588 (<.0001)
Rest of GB	88.4	58.5	31.5	64.0	83.8	
Greater London	11.6	41.5	68.5	36.0	16.2	
Marital Status						35.1317 (<.0001)
Single	38.6	50.6	47.9	44.1	41.6	
Cohabiting	17.1	13.5	10.3	1.7	3.7	
Married	39.9	30.5	35.8	51.3	53.6	
Sep./Widow./Divorced	4.4	5.4	6.0	2.8	1.1	
Social Class						22.5612 (.0002)
I & II	36.7	16.4	50.0	47.1	27.5	
III M & III NM	43.8	56.3	37.0	35.7	53.1	
IV & V	19.5	27.3	13.0	17.2	19.4	
Educational Attainment						52.7371 (<.0001)
Degree	20.7	10.1	44.4	32.8	17.7	
A Level	14.0	13.7	20.8	17.6	16.2	
GCSE / Other	48.2	50.0	27.4	43.7	44.1	
None	17.1	26.3	7.4	5.9	22.0	

**Table 7-4. Demographic characteristics, WOMEN. Natsal 2000**

Region/Country of birth	self-reported ethnicity (%)					Chi-square statistic (& p-value)
	White	Black Caribbean	Black African	Indian	Pakistani	
Base (Unweighted/Weighted)	5697, 5434	354, 117	271, 65	222, 115	188, 55	
Age						23.0148 (.0004)
16-24	25.7	16.2	19.0	30.3	40.5	
25-34	37.4	40.3	40.1	40.7	40.1	
35-44	36.9	43.5	41.0	29.0	19.4	
Region						504.3922 (<.0001)
Rest of GB	88.7	59.2	14.3	66.9	81.8	
Greater London	11.3	40.8	85.8	33.1	18.2	
Marital Status						83.1301 (<.0001)
Single	29.0	48.0	31.8	31.8	35.6	
Cohabiting	18.9	19.2	6.4	4.6	0.7	
Married	44.6	24.3	44.9	60.5	55.5	
Sep./Widow./Divorced	7.6	8.6	16.9	3.2	8.2	
Social Class						7.3940 (.2262)
I & II	30.6	37.4	26.2	39.4	30.6	
III M & III NM	46.3	45.2	48.0	42.4	48.1	
IV & V	23.1	17.4	25.8	18.2	21.4	
Educational Attainment						35.5102 (<.0001)
Degree	17.1	19.7	27.0	29.2	17.5	
A Level	16.0	12.0	17.3	16.6	16.1	
GCSE / Other	50.2	50.7	47.4	43.7	49.9	
None	16.8	17.6	8.3	10.5	16.6	



Table 7-5. Distribution of numbers of heterosexual partners<sup>1</sup> over lifetime and in the last 5 years by gender and ethnic group: Natsal 2000

	MEN					WOMEN						
	White	Black Caribbean	Black African	Indian	Pakistani	All	White	Black Caribbean	Black African	Indian	Pakistani	All
<b>Lifetime<sup>2</sup></b>												
0	6.7% (5.9-7.6)	5.8% (2.4-13.2)	5.5% (2.9-10.1)	23.9% (15.0-35.8)	27.7% (17.5-41.0)	7.2% (6.5-8.1)	4.5% (3.9-5.2)	6.4% (3.4-11.7)	8.8% (5.3-14.1)	13.1% (7.8-21.2)	35.3% (25.8-46.2)	5.3% (4.6-5.9)
1	10.5% (9.5-11.7)	2.7% (1.2-5.8)	8.5% (4.2-16.4)	28.2% (20.3-37.9)	27.1% (19.1-36.9)	11.0% (10.0-12.2)	17.1% (15.9-18.3)	12.1% (7.9-18.0)	24.3% (16.6-34.1)	58.6% (48.7-67.8)	52.2% (41.7-62.4)	18.3% (17.3-19.6)
2	7.5% (6.6-8.5)	4.2% (2.0-8.8)	8.8% (4.0-18.5)	6.3% (3.4-11.1)	11.6% (7.3-18.1)	7.5% (6.6-8.4)	10.9% (10.0-11.8)	14.3% (10.4-19.4)	14.1% (9.9-19.8)	7.8% (4.1-14.2)	5.5% (3.3-9.0)	10.9% (10.1-11.8)
3-4	14.8% (13.6-16.1)	18.7% (11.1-29.7)	10.4% (5.5-18.7)	9.4% (5.6-15.4)	11.1% (5.8-20.4)	14.6% (13.5-15.8)	20.3% (19.2-21.5)	19.3% (14.2-25.7)	22.6% (16.7-29.8)	8.6% (5.5-13.1)	3.8% (1.1-12.1)	19.6% (18.7-20.9)
5-9	25.6% (24.0-27.1)	27.1% (19.1-36.8)	25.6% (17.4-35.8)	17.7% (10.9-27.6)	5.6% (3.2-9.7)	25.2% (23.9-26.7)	27.1% (25.9-28.4)	32.6% (25.6-40.5)	18.2% (12.8-25.2)	6.2% (2.4-15.3)	2.7% (1.3-5.5)	26.5% (25.1-27.6)
10+	35.0% (33.3-36.7)	41.6% (32.6-51.2)	41.2% (31.7-51.5)	14.5% (9.1-22.3)	16.9% (9.7-27.7)	34.6% (32.9-36.0)	20.1% (18.9-21.3)	15.3% (10.8-21.8)	12.1% (7.6-18.7)	5.9% (2.1-15.3)	0.6% (0.1-2.7)	19.4% (18.2-20.5)
Mean	12.5	23.9	14.0	5.2	7.4	12.7	6.7	6.3	4.6	2.3	1.1	6.5
SD	31.5	72.4	43.9	9.4	27.2	35.2	9.7	11.8	16.6	3.8	1.9	9.7
Median	6	9	9	2	1	6	5	4	3	1	1	4
99 <sup>th</sup> centile	100	277.5	170	72.1	242	100	50	50	30	24.61	16.7	39
Unwt/bases <sup>3</sup>	4164, 5520	188, 106	199, 74	164, 108	159, 53	5019, 6024	5607, 5358	348, 114	263, 64	202, 107	169, 50	6765, 5827
<b>Last 5 years<sup>2</sup></b>												
0	8.5% (7.6-9.4)	8.2% (4.0-15.8)	7.1% (4.1-12.0)	25.5% (16.4-37.4)	29.6% (19.1-42.8)	9.0% (8.2-10.0)	6.1% (5.4-6.9)	11.6% (7.4-17.6)	13.4% (9.0-19.6)	14.3% (8.8-22.5)	37.2% (27.4-48.4)	7.0% (6.2-7.7)
1	43.2% (41.5-45.0)	25.4% (16.5-37.1)	29.9% (21.3-40.3)	44.6% (34.6-55.0)	43.2% (32.6-54.4)	42.4% (41.0-44.2)	55.7% (54.1-57.3)	47.3% (39.8-54.9)	62.2% (54.1-69.7)	69.0% (58.9-77.6)	55.7% (45.2-65.7)	55.6% (54.3-57.3)
2	12.3% (11.2-13.4)	7.8% (3.9-15.0)	17.4% (9.7-29.0)	5.7% (2.9-10.7)	10.1% (6.3-15.6)	12.1% (11.1-13.1)	13.9% (13.0-14.9)	16.1% (11.6-21.8)	9.4% (6.1-14.1)	7.2% (3.1-15.9)	2.8% (1.5-5.1)	13.7% (12.7-14.6)
3-4	15.1% (14.0-16.4)	22.9% (16.0-31.8)	19.2% (13.2-27.0)	11.0% (6.1-19.0)	5.9% (3.1-10.9)	15.1% (14.1-16.4)	12.4% (11.4-13.5)	14.7% (10.3-20.4)	8.6% (5.5-13.2)	6.1% (3.2-11.2)	3.7% (1.0-12.7)	12.1% (11.3-13.2)
5-9	12.7% (11.6-13.9)	23.2% (15.0-34.2)	11.8% (7.7-17.6)	10.0% (5.3-18.1)	1.7% (0.6-4.5)	12.9% (11.7-13.9)	8.2% (7.4-9.0)	7.8% (4.8-12.6)	4.5% (2.2-8.8)	3.4% (0.7-14.8)	0.6% (0.1-2.7)	8.0% (7.1-8.7)
10+	8.3% (7.4-9.2)	12.5% (7.4-20.3)	14.7% (9.1-22.7)	3.3% (1.7-6.5)	9.7% (4.2-20.5)	8.4% (7.5-9.3)	3.7% (3.2-4.4)	2.6% (0.9-7.5)	1.9% (0.5-7.0)	0.0% (0.0-0.0)	0.0% (0.0-0.0)	3.6% (3.1-4.2)
Mean	3.7	5.9	4.8	2.2	3.4	3.8	2.4	2.7	1.7	1.3	0.8	2.4
SD	8.0	10.1	9.5	4.2	12.6	8.2	4.2	10.2	3.0	1.3	0.9	4.6
Median	2	3	3	1	1	1	1	1	1	1	1	1
99 <sup>th</sup> centile	30	42.4	32	28.9	129.8	30	20	22.8	11.4	7.0	6	19
Unwt/wt bases <sup>3</sup>	4136, 5479	187, 106	197, 73	160, 104	153, 51	4974, 5971	5562, 5311	343, 112	261, 64	201, 107	168, 49	6711, 5777

**Table 7-6. Distribution of behaviours (95% confidence interval) concerning new partners and concurrency in last year, frequency of heterosexual sex in last month, and partners from outside the United Kingdom in last 5 years by ethnicity: (MEN) Natsal 2000**

Behaviour	Men Ethnicity White	Black Caribbean	Black African	Indian	Pakistani	All
Last year <sup>1</sup>						
1+ new hetero partner(s) <sup>2</sup>	29.6% (28.1-31.1)	41.6% (31.3-52.7)	43.8% (34.1-54.1)	23.2% (16.5-31.5)	22.7% (14.8-33.2)	29.8% (28.4-31.3)
1+ new homo partner(s) <sup>3</sup>	1.4% (1.1-1.9)	2.1% (0.8-5.5)	1.1% (0.3-3.8)	0.3% (0.0-2.1)	0.1% (0.0-1.0)	1.4% (1.1-1.8)
Any new sexual partner(s)	30.9% (29.4-32.5)	43.4% (32.7-54.7)	44.7% (34.9-55.0)	23.4% (16.6-31.8)	23.1% (15.1-33.7)	31.2% (29.8-32.7)
Mean number of new sexual partners <sup>4</sup>						
Married	0.13 (0.09-0.16)	0.28 (0.00-0.62)	0.46 (0.19-0.72)	0.18 (0.07-0.28)	0.49 (0.16-0.82)	0.14 (0.11-0.17)
Cohabiting	0.47 (0.35-0.59)	0.38 (0.01-0.75)	1.07 (0.49-1.65)	0.00	0.0	0.47 (0.35-0.57)
Previously married						
Single	1.26 (1.05-1.47)	0.75 (0.29-1.20)	0.72 (0.00-1.86)	0.22 (0.00-0.57)	15.53 (0.00-49.92)	1.26 (1.07-1.47)
All	1.66 (1.44-1.88)	1.77 (1.17-2.38)	1.80 (0.68-2.92)	0.74 (0.32-1.15)	0.71 (0.00-1.51)	1.64 (1.43-1.84)
Standard deviation	0.83 (0.74-0.92)	1.08 (0.70-1.45)	1.18 (0.61-1.75)	0.44 (0.24-0.64)	0.69 (0.23-1.15)	0.84 (0.75-0.92)
	3.61	1.91	2.86	1.17	2.82	3.53
First sex within one month of meeting most recent sexual partner <sup>5</sup>	56.7% (53.5-59.8)	67.0% (54.0-77.8)	46.5% (32.0-61.7)	54.2% (37.2-70.3)	60.0% (38.1-78.4)	56.5% (53.5-59.4)
Concurrent <sup>5</sup> sexual partnership(s) <sup>6</sup>	13.9% (12.7-15.3)	25.4% (17.6-35.1)	34.5% (22.8-48.3)	16.1% (8.0-29.8)	13.2% (6.9-23.7)	14.6% (13.4-16.0)
New sexual partner(s) from outside the United Kingdom in the last 5 years <sup>8</sup>	13.2% (12.0-14.5)	20.4% (13.3-30.2)	33.2% (24.3-43.5)	13.0% (8.1-20.2)	18.6% (10.6-31.9)	14.0% (12.9-15.1)

Notes for Table 7-6:

1. Of all respondents aged 16-44
2. A heterosexual partner is defined as a person of the opposite gender with whom the respondent had oral, anal or vaginal sexual intercourse
3. A homosexual partner is defined as a person of the same gender with whom the respondent had any form of genital contact
4. Of all respondents aged 16-44 who had had 1+ new heterosexual/homosexual partner(s) in the year prior to interview
5. Partnerships are considered concurrent if the month and year of first sex with the more recent partner is prior to the month and year of last sex with the former partner. For those respondents unable to provide both date components but the partnerships did not occur in the same year, then concurrency is assumed not to be possible. For the remaining respondents who had at least 2 partners in the year prior to interview, then these partners are assumed to be distributed between the serial monogamous and concurrent categories with equal probabilities to those whose dates are known.
6. Of all respondents aged 16-44 who had had 1+ heterosexual &/or homosexual partner(s) in the year prior to interview
7. Vaginal, oral or anal sex among respondents aged 16-44 who had had 1+ heterosexual partner(s) in the year prior to interview
8. Of all respondents aged 16-44 who had had 1+ heterosexual &/or homosexual partner(s) in the 5 years prior to interview



**Table 7-7. Distribution of behaviours (95% confidence interval) concerning new partners and concurrency in last year, frequency of heterosexual sex in last month, and partners from outside the United Kingdom in last 5 years by ethnicity: (WOMEN) Natsal 2000**

Behaviour	WOMEN Ethnicity White	Black Caribbean	Black African	Indian	Pakistani	All
Last year <sup>1</sup>						
1+ new hetero partner(s) <sup>2</sup>	21.1% (19.8-22.4)	22.4% (17.1-28.8)	16.5% (11.8-22.6)	17.2% (10.5-27.0)	8.9% (4.1-18.3)	21.1% (20.0-22.3)
1+ new homo partner(s) <sup>3</sup>	0.9% (0.7-1.2)	1.0% (0.4-2.5)	0.6% (0.2-1.6)	0.0%	0.8% (0.2-3.9)	0.9% (0.6-1.2)
Any new sexual partner(s)	21.4% (20.1-22.7)	22.8% (17.4-29.3)	16.7% (12.0-22.9)	17.2% (10.5-27.0)	9.0% (4.1-18.5)	21.4% (20.3-22.6)
Mean number of new sexual partners <sup>4</sup>						
Married	0.06 (0.05-0.07)	0.44 (0.00-1.28)	0.15 (0.01-0.29)	0.08 (0.03-0.13)	0.12 (0.01-0.22)	0.07 (0.05-0.08)
Cohabiting	0.28 (0.21-0.35)	0.19 (0.00-0.39)	0.19 (0.00-0.40)	0.34 (0.00-1.00)	0.0	0.28 (0.21-0.35)
Previously married	0.72 (0.60-0.85)	0.48 (0.00-0.97)	0.14 (0.02-0.26)	0.08 (0.00-0.22)	0.10 (0.00-0.24)	0.69 (0.58-0.81)
Single	0.82 (0.74-0.90)	0.49 (0.32-0.67)	0.79 (0.16-1.59)	0.41 (0.10-0.72)	0.06 (0.00-0.18)	0.80 (0.72-0.88)
All	0.37 (0.34-0.41)	0.42 (0.20-0.64)	0.35 (0.08-0.61)	0.20 (0.08-0.32)	0.09 (0.02-0.16)	0.38 (0.34-0.40)
Standard deviation	1.09	2.11	1.26	0.47	0.31	1.18
First sex within one month of meeting most recent sexual partner <sup>4</sup>	43.9% (40.9-47.0)	37.8% (24.3-53.5)	37.9% (21.4-57.7)	29.4% (10.6-59.6)	20.9% (4.8-57.8)	42.8% (39.8-45.8)
Concurrent <sup>5</sup> sexual partnership(s) <sup>6</sup>	8.8% (7.9-9.9)	11.5% (7.2-17.8)	4.8% (2.4-9.3)	8.8% (2.3-28.3)	1.6% (0.4-5.4)	9.0% (8.2-10.0)
New sexual partner(s) from outside the United Kingdom in the last 5 years <sup>8</sup>	6.3% (5.6-7.0)	18.1% (12.7-25.0)	7.8% (4.7-12.6)	9.9% (4.8-19.4)	11.0% (5.0-22.4)	7.1% (6.5-7.9)

Notes for Table 6-7:

1. Of all respondents aged 16-44
2. A heterosexual partner is defined as a person of the opposite gender with whom the respondent had oral, anal or vaginal sexual intercourse
3. A homosexual partner is defined as a person of the same gender with whom the respondent had any form of genital contact
4. Of all respondents aged 16-44 who had had 1+ new heterosexual/homosexual partner(s) in the year prior to interview
5. Partnerships are considered concurrent if the month and year of first sex with the more recent partner is prior to the month and year of last sex with the former partner. For those respondents unable to provide both date components but the partnerships did not occur in the same year, then concurrency is assumed not to be possible. For the remaining respondents who had at least 2 partners in the year prior to interview, then these partners are assumed to be distributed between the serial monogamous and concurrent categories with equal probabilities to those whose dates are known.
6. Of all respondents aged 16-44 who had had 1+ heterosexual &/or homosexual partner(s) in the year prior to interview
7. Vaginal, oral or anal sex among respondents aged 16-44 who had had 1+ heterosexual partner(s) in the year prior to interview

**Table 7-8. Sexual mixing matrix of ethnic group of respondents and their current live-in partner. Natsal 2000***Estimates shown in grey denote ethnically assortative mixing.***a) Women**

Partner's ethnicity reported by women	Self-reported ethnicity: Women % (95% CI)					All women <sup>1</sup>
	White	Black Caribbean	Black African	Indian	Pakistani	
Base (UNW/WT <sup>2</sup> )	3142, 3397	100, 46	102, 28	127, 70	98, 28	3606, 3601,
White	99.1 (98.7-99.4)	36.4 (23.9-50.9)	4.1 (1.8-9.4)	14.3 (7.7-25.0)	1.1 (0.3-4.6)	95.0 (94.3-95.7)
Black Caribbean	0.6 (0.4-0.9)	59.6 (45.4-72.4)	4.7 (1.9-11.3)	0	0	1.4 (1.1-1.9)
Black African	0.2 (0.0-0.4)	3.5 (1.6-7.4)	90.3 (83.0-94.6)	0.3 (0.0-2.0)	2.1 (0.3-13.6)	0.9 (0.7-1.2)
Indian	0.1 (0.0-0.4)	0.6 (0.1-4.2)	0	78.9 (67.2-87.1)	2.2 (0.7-6.3)	1.7 (1.3-2.2)
Pakistani	0.0 (0.0-3.3)	0	1.0 (0.1-6.5)	6.6 (2.6-15.8)	94.6 (87.0-97.9)	0.9 (0.7-1.3)
Column %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Row % <sup>3</sup>	94.3 (93.5-95.1)	1.3 (1.0-1.7)	0.8 (0.6-1.0)	2.0 (1.5-2.5)	0.8 (0.6-1.1)	100.0%
Women not cohabiting (excluded from base)						
Base (UNW/WT <sup>2</sup> )	2496, 1984	246, 66	154, 32	84, 40	85, 24	3160, 2210
Row % <sup>4</sup>	92.5 (91.3-93.5)	3.1 (2.5-3.8)	1.5 (1.2-1.9)	1.9 (1.3-2.6)	1.1 (0.8-1.6)	100.0%
All women <sup>5</sup>						
Base (UNW/WT <sup>2</sup> )	5697, 5434	354, 117	271, 65	222, 115	188, 55	6918, 5927
Row %	91.7 (90.9-92.4)	2.0 (1.7-2.3)	1.1 (0.9-1.3)	1.9 (1.6-2.4)	0.9 (0.7-1.2)	100.0%

**b) Men**

Partner's ethnicity reported by men	Self-reported ethnicity: Men % (95% CI)					All men <sup>1</sup>
	White	Black Caribbean	Black African	Indian	Pakistani	
Base (UNW/WT <sup>2</sup> )	1989, 3152	54, 45	73, 32	74, 54	92, 30	2308, 3349
White	99.5 (99.2-99.7)	57.3 (39.2-73.6)	18.0 (8.1-35.3)	15.1 (6.6-30.7)	6.6 (2.0-20.1)	95.9 (95.1-96.6)
Black Caribbean	0.2 (0.0-0.5)	36.6 (21.4-55.1)	3.3 (1.2-8.4)	0	0	0.7 (0.4-1.2)
Black African	0.0 (0.0-0.1)	2.0 (0.4-8.7)	76.7 (60.4-87.7)	0	0	0.8 (0.6-1.1)
Indian	0.1 (0.0-0.5)	4.1 (0.6-24.1)	2.0 (0.5-7.6)	84.9 (69.3-93.4)	0.7 (0.1-4.8)	1.6 (1.2-2.2)
Pakistani	0.1 (0.0-0.4)	0	0	0	92.7 (79.8-97.6)	1.0 (0.8-1.4)
Column %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Row % <sup>3</sup>	94.1 (93.1-95.0)	1.3 (0.9-2.0)	1.9 (0.7-1.3)	1.6 (1.2-2.2)	0.9 (0.7-1.2)	100.0%
Men not cohabiting (excluded from base)						
Base (WT/UNW <sup>2</sup> )	2412, 2217	61, 137	41, 130	52, 90	24, 80	2672, 2742
Row % <sup>4</sup>	93.1 (92.0-94.1)	2.3 (1.9-3.0)	1.6 (1.2-2.1)	2.0 (1.5-2.8)	0.9 (0.7-1.4)	100.0%
All men <sup>5</sup>						
Base (UNW/WT <sup>2</sup> )	4238, 5608	196, 108	207, 76	171, 111	177, 57	5146, 6137
Row %	91.4 (90.5-92.2)	1.8 (1.4-2.2)	1.2 (1.0-1.5)	1.8 (1.4-2.3)	0.9 (0.7-1.2)	100.0%

**Notes**

1. Who reported their ethnicity as white, Black Caribbean, Black African, Indian or Pakistani. Thus excludes those who did not report their ethnicity or reported their ethnicity as 'other'.
2. UNW/WT corresponds to 'unweighted/weighted'.
3. These row percentages give the percentage distribution of respondents in a live-in partnership by ethnic group for comparison with the final row of row percentages which is the percentage distribution of all respondents.
4. The percentage distribution of respondents not in a live-in partnership by ethnic group for comparison with the final row of row percentages which is the percentage distribution of all respondents.
5. Who reported their ethnicity as white, Black Caribbean, Black African, Indian or Pakistani, and regardless of whether or

not they were in a live-in partnership at interview.



**Table 7-9. Adverse sexual and reproductive health outcomes, MEN: Natsal 2000**

MEN	White	Black Caribbean	Black African	Ethnic group Indian	Pakistani	Chi <sup>2</sup> and/ or p value
<b>Age at first intercourse<sup>1</sup></b>						
Median age <sup>2</sup>	17	15	17	20	20	
Proportion under 16 at first sex	27.9 (26.4-29.5)	56.3 (47.3-64.8)	29.6 (21.5-39.1)	10.3 (6.1-17.0)	11.2 (5.7-20.7)	56.41, p<.0001
N unweighted, weighted	4226, 5596	194, 108	203, 74	170, 111	165, 54	
<b>Use of contraception at 1<sup>st</sup> intercourse<sup>3</sup></b>						
Condom	48.6 (46.8-50.5)	41.1 (30.8-52.3)	40.6 (30.7-51.4)	53.5 (41.9-64.7)	39.8 (28.8-52.0)	4.96 p=.1902
No contraception	22.0 (20.5-23.6)	35.9 (26.4-46.7)	37.0 (28.2-46.7)	28.1 (19.2-39.0)	47.2 (36.2-58.5)	28.63 p<.0001
Pill	23.5 (22.1-25.0)	10.4 (5.8-17.8)	12.8 (6.1-25.0)	14.0 (7.8-23.9)	7.9 (3.2-18.4)	19.00, p=.0003
N unweighted, weighted	3895, 5195	183, 101	191, 70	139, 84	126, 39	
<b>Proportion fathering child before age 18<sup>4</sup></b>						
N unweighted, weighted	0.8 (0.5-1.2) 3968, 5238	3.9 (1.1-12.5) 181, 97	0.5 (0.1-2.2) 196, 71	0.0 158, 94	0.0 162, 52	10.79, p=.0338
<b>Proportion ever attended GUM clinic</b>						
N unweighted, weighted	14.1 (12.9-15.3) 4030, 5341	28.0 (20.6-36.8) 185, 102	25.8 (18.2-35.3) 198, 73	6.0 (2.7-12.8) 149, 89	4.1 (1.9-8.6) 137, 46	27.26, p<.0001
<b>Proportion diagnosed with an STI<sup>1,5</sup></b>						
N unweighted, weighted	10.9 (9.9-12.0) 4030, 5341	19.7 (13.6-27.9) 185, 102	16.2 (10.8-23.4) 198, 73	3.4 (1.0-11.9) 149, 89	3.2 (1.3-7.5) 137, 46	15.04, p=.0005
<b>Proportion ever had an HIV test<sup>1,6</sup></b>						
N unweighted, weighted	12.3 (11.2-13.5) 3786, 5020	23.0 (15.4-32.8) 174, 96	32.7 (24.4-42.1) 190, 72	9.6 (4.7-18.6) 140, 84	7.3 (3.8-13.7) 128, 43	31.16, p<.0001

**Footnotes:**

1. Of all respondents aged 16-44 at interview
2. Medians for age at first intercourse are calculated using life table analysis
3. Base excludes respondents who have not had heterosexual intercourse
4. Of all respondents aged 18-44 at interview
5. Excluding thrush
6. Excludes those who were not sure whether or not they had had an HIV test

Table 7-10. Adverse sexual and reproductive health outcomes, WOMEN: Natsal 2000

WOMEN	Ethnic group					Chi <sup>2</sup> and/ or p value
	White	Black Caribbean	Black African	Indian	Pakistani	
Age at first intercourse <sup>1</sup>						
Median age <sup>2</sup>	17	17	18	21	22	
% aged <16	22.0 (20.7-23.2)	22.3 (16.3-29.7)	12.0 (7.7-18.2)	1.0 (0.4-2.7)	2.9 (1.1-7.0)	50.43, p<.0001
N unweighted, weighted	5676, 5414	350, 116	270, 65	216, 112	185, 54	
Use of contraception at 1 <sup>st</sup> intercourse <sup>3</sup>						
Condom	54.3 (52.7-55.9)	41.2 (34.4-48.4)	25.7 (19.5-33.0)	52.7 (42.8-62.3)	24.4 (15.7-35.9)	44.76, p<.0001
No contraception	20.8 (19.5-22.0)	36.4 (29.1-44.3)	52.2 (43.5-60.9)	27.7 (20.7-36.0)	54.5 (43.1-65.5)	85.22, p<.0001
Pill	26.8 (25.5-28.2)	21.9 (16.1-29.1)	8.4 (5.5-12.6)	14.5 (9.2-22.2)	22.3 (13.6-34.2)	21.46, p<.0001
N unweighted, weighted	5394, 5129	328, 108	245, 59	183, 94	139, 36	
Proportion mothering child before age 18 <sup>4</sup>						
N unweighted, weighted	4.8 (4.2-5.5) 5414, 5092	12.8 (8.3-19.2) 340, 111	4.4 (2.6-7.5) 255, 61	0.5 (0.1-2.2) 206, 107	2.5 (1.0-6.2) 176, 51	23.85, p<.0001
Proportion ever having had a TOP						
N unweighted, weighted	16.7 (15.6-17.8) 5650, 5396	25.4 (19.6-32.2) 352, 115	38.8 (31.8-46.3) 267, 65	15.3 (9.9-22.9) 210, 110	4.5 (2.6-7.8) 173, 51	39.23, p<.0001
Proportion ever attended GUM clinic						
N unweighted, weighted	11.9 (11.0-12.8) 5498, 5234	38.5 (31.3-46.2) 336, 109	17.5 (12.0-24.7) 250, 60	9.5 (4.6-18.7) 192, 102	2.2 (0.9-5.2) 141, 41	87.54, p<.0001
Proportion ever diagnosed with an STI <sup>1,5</sup>						
N unweighted, weighted	12.4 (11.5-13.3) 5498, 5232	22.7 (17.3-29.3) 336, 109	14.1 (9.2-21.0) 250, 59	7.8 (3.8-15.1) 192, 102	3.6 (1.4-9.2) 141, 41	18.13, p=.0001
Proportion ever having had an HIV test <sup>1,6</sup>						
N unweighted, weighted	11.3 (10.4-12.3) 5128, 4901	20.6 (14.7-28.2) 315, 104	42.3 (34.0-51.1) 232, 55	10.3 (6.1-16.7) 186, 99	7.5 (4.1-12.7) 132, 38	67.84, p<.0001

Footnotes:

1. Of all respondents aged 16-44 at interview
2. Medians for age at first intercourse are calculated using life table analysis
3. Base excludes respondents who have not had heterosexual intercourse
4. Of all respondents aged 18-44 at interview
5. Excluding thrust
6. Excludes those who were not sure whether or not they had had an HIV test

**Table 7-11. The frequency, odds and adjusted odds ratios for STI acquisition within the past 5 years**

Characteristics	MEN			
	Percentage (95% CI)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)	BASE (UW, WT)
All respondents <sup>a</sup>	2.95 (2.44-3.56)	-	-	4683, 5616
Age		p<.00001	p=.0024	
16-24	2.51 (1.65-3.79)	1.00	1.00	1125, 1361
25-34	4.57 (3.58-5.82)	1.86 (1.13-3.08)	2.43 (1.34-4.41)	1815, 2160
35-44	1.56 (1.07-2.27)	0.62 (0.36-1.07)	1.32 (0.64-2.76)	1743, 2094
Region		p=.028	p=.890	
Rest of GB	2.75 (2.19-3.44)	1.00	1.00	3423, 4807
Greater London	4.15 (3.10-5.54)	1.53 (1.05-2.24)	1.03 (0.67-1.59)	1260, 809
Marital status		p=.0004	p=.8341	
Married	1.47 (1.00-2.25)	1.00	1.00	1640, 2343
Single	3.95 (3.06-5.09)	2.77 (1.69-4.52)	0.99 (0.51-1.89)	2069, 2058
Cohabiting	4.27 (2.89-6.26)	3.00 (1.66-5.41)	1.08 (0.54-2.17)	642, 961
Sep./Widow./Divorced	3.25 (1.70-6.14)	2.26 (1.01-5.06)	0.72 (0.28-1.80)	324, 246
Social class		p=.989	p=.9967	
I & II	3.10 (2.31-4.15)	1.00	1.00	1634, 1934
III	3.00 (2.20-4.09)	0.97 (0.63-1.50)	1.02 (0.65-1.59)	1827, 2259
IV & V	3.04 (1.99-4.59)	0.98 (0.58-1.66)	1.00 (0.56-1.80)	831, 993
Ethnic Group		p=.0005	p=.0152	
White	2.84 (2.31-3.49)	1.00	1.00	3887, 5149
Black Caribbean	7.58 (3.70-14.88)	2.80 (1.27-6.17)	2.59 (1.01-6.63)	174, 97
Black African	7.76 (4.14-14.11)	2.88 (1.42-5.83)	2.98 (1.27-6.99)	194, 73
Indian	0.42 (0.01-2.95)	0.14 (0.02-1.05)	0.21 (0.03-1.63)	149, 89
Pakistani	1.60 (.042-5.89)	0.56 (0.14-2.18)	0.94 (0.21-4.19)	137, 46
Number of sexual partners in past 5 years		p<.00001	p<.00001	
0-1	0.53 (0.28-1.00)	1.00	1.00	1990, 2639
2-4	3.44 (2.42-4.90)	6.48 (3.08-13.64)	5.62 (2.52-12.55)	1369, 1573
5-9	4.72 (3.26-6.80)	9.10 (4.35-19.03)	7.01 (2.97-16.52)	687, 762
10+	11.88 (8.89-15.69)	24.59 (12.34-48.98)	17.01 (7.47-40.38)	494, 501
Homosexual partner		p<.00001	p=.039	
No	2.71 (2.21-3.34)	1.00	1.00	4461, 5414
Yes	10.46 (6.59-16.20)	4.18 (2.42-7.25)	1.88 (1.03-3.41)	179, 162
Injected drugs		p=.088	p=.895	
No	2.89 (2.39-3.50)	1.00	1.00	4627, 5545
Yes	7.42 (2.53-19.83)	2.69 (0.86-8.38)	0.90 (0.19-4.33)	55, 70
Paid for sex (men only)		p<.00001	p=.389	
No	2.65 (2.16-3.24)	1.00	1.00	4422, 5372
Yes	9.65 (5.62-16.07)	3.93 (2.10-7.34)	1.43 (0.75-2.71)	259, 242
New sex partners from other country/ies?		p<.00001	p=.389	
No	2.27 (1.78-2.89)	1.00	1.00	3581, 4571
Yes	8.26 (6.14-11.02)	3.87 (2.59-5.79)	1.22 (0.78-1.91)	784, 741

**Footnotes:**

a: Excludes those who refused whole self-completion or did not answer whether they have had an STI in the past 5 years;

b: Adjusted for all demographic and behavioural variables in the table via logistic regression modelling



**Table 7-12. The frequency, odds and adjusted odds ratios for STI acquisition within the past 5 years, WOMEN**

Characteristics	WOMEN			
	percentage (95% CI)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)	BASE (UW, WT)
All respondents <sup>a</sup>	4.01 (3.49-4.61)	-	-	6338, 5472
Age		p<.00001	p=.0028	
16-24	6.29 (5.02-7.86)	1.00	1.00	1304, 1316
25-34	4.87 (3.98-5.95)	0.76 (0.55-1.05)	0.98 (0.61-1.56)	2591, 2116
35-44	1.65 (1.19-2.29)	0.25 (0.17-0.38)	0.45 (0.25-0.83)	2443, 2041
Region		p=.004	p=.561	
Rest of GB	3.73 (3.17-4.39)	1.00	1.00	4691, 4721
Greater London	5.77 (4.49-7.38)	1.58 (1.16-2.16)	1.13 (0.74-1.73)	1647, 751
Marital status		p<.00001	p=.0509	
Married	2.03 (1.52-2.71)	1.00	1.00	2575, 2515
Single	5.16 (4.19-6.35)	2.62 (1.82-3.78)	0.97 (0.55-1.72)	2053, 1505
Cohabiting	7.19 (5.58-9.22)	3.74 (2.52-5.55)	1.64 (0.94-2.87)	979, 1022
Sep./Widow./Divorced	3.72 (2.52-5.46)	1.86 (1.14-3.04)	1.36 (0.75-2.48)	723, 424
Social class		p=.3041	p=.3464	
I & II	4.13 (3.21-5.30)	1.00	1.00	1799, 1493
III	4.41 (3.59-5.42)	1.07 (0.76-1.51)	1.02 (0.69-1.51)	2505, 2220
IV & V	3.29 (2.40-4.50)	0.79 (0.53-1.18)	0.75 (0.46-1.21)	1229, 1101
Ethnic Group		p=.0039	p=.0035	
White	3.92 (3.37-4.56)	1.00	1.00	5285, 5042
Black Caribbean	8.56 (5.11-13.98)	2.29 (1.29-4.08)	2.66 (1.43-4.95)	314, 104
Black African	6.94 (3.63-12.84)	1.82 (0.91-3.68)	3.29 (1.36-7.92)	242, 57
Indian	1.68 (0.31-8.68)	0.42 (0.07-2.35)	0.95 (0.15-6.06)	187, 99
Pakistani	0.54 (0.01-3.81)	0.13 (0.02-0.98)	0.47 (0.06-3.71)	139, 40
Number of sexual partners in past 5 years		p<.00001	p<.00001	
0-1	1.77 (1.37-2.28)	1.00	1.00	3637, 3256
2-4	4.73 (3.73-5.99)	2.65 (1.84-3.80)	1.83 (1.18-2.83)	1782, 1431
5-9	10.87 (8.05-14.53)	6.45 (4.26-9.78)	3.90 (2.23-6.81)	517, 445
10+	19.20 (14.12-25.44)	12.70 (8.17-19.75)	7.12 (3.83-13.23)	226, 206
Homosexual partner		p<.00001	p=.206	
No	3.68 (3.18-4.25)	1.00	1.00	6096, 5280
Yes	15.01 (10.19-21.56)	4.62 (2.94-7.28)	1.44 (0.82-2.56)	186, 154
Injected drugs		p=.008	p=.520	
No	3.97 (3.45-4.56)	1.00	1.00	6313, 5452
Yes	15.73 (5.76-36.32)	4.52 (1.48-13.83)	1.70 (0.33-8.68)	24, 20
New sex partners from other country/ies?		p<.00001	p=.032	
No	3.48 (2.98-4.06)	1.00	1.00	5433, 4818
Yes	12.60 (9.54-16.47)	4.00 (2.84-5.64)	1.63 (1.04-2.55)	504, 369

**Footnotes:**

a: Excludes those who refused whole self-completion or did not answer whether they have had an STI in the past 5 years;

b: Adjusted for all demographic and behavioural variables in the table via logistic regression modelling

**Table 7-13 Reported GUM clinic attendance in the past 5 years, MEN  
(adjusting for age/region and marital status)**

MEN				
Characteristics	Prevalence % (95% CI)	Unadjusted OR (95% CI)	Adjusted <sup>b</sup> OR (95% CI)	BASE (UW, WT)
All respondents <sup>a</sup>	7.58 (6.76-8.49)	-	-	4847,5820
Age		P<.00001	p=.0339	
16-24	8.26 (6.56-10.36)	1.00	1.00	1149, 1394
25-34	10.00 (8.56-11.65)	1.23 (0.91-1.67)	1.58 (1.04-2.38)	1883, 2252
35-44	4.64 (3.74-5.73)	0.54 (0.39-0.75)	1.18 (0.73-1.93)	1815, 2174
Region		p<.00001	p=.143	
Rest of Britain	6.75 (5.87-7.74)	1.00	1.00	3542, 4984
Greater London	12.55 (10.43-15.02)	1.98 (1.53-2.56)	1.27 (0.92-1.74)	1305, 836
Ethnic Group		p<.00001	p=.0029	
White	7.27 (6.42-8.22)	1.00	1.00	4030, 5341
Black Caribbean	16.15 (11.11-22.88)	2.46 (1.57-3.86)	2.14 (1.25-3.65)	185, 102
Black African	20.09 (12.97-29.78)	3.21 (1.86-5.52)	3.34 (1.49-7.48)	198, 73
Indian	3.46 (1.72-6.81)	0.46 (0.22-0.95)	0.80 (0.36-1.79)	149, 89
Pakistani	2.84 (1.16-6.77)	0.37 (0.15-0.94)	0.81 (0.30-2.18)	138, 46
Marital status		p<.00001	p=.0196	
Married	3.15 (2.41-4.10)	1.00	1.00	1693, 2428
Single	10.73 (9.28-12.38)	3.70 (2.70-5.06)	1.77 (1.12-2.79)	2129, 2121
Cohabiting	11.53 (9.22-14.33)	4.01 (2.77-5.81)	1.92 (1.23-3.01)	670, 1000
Sep./Widow./Div.	7.94 (5.42-11.49)	2.65 (1.61-4.37)	1.20 (0.65-2.20)	347, 264
Social class		p=.5055	p=.7512	
I & II	8.20 (6.89-9.73)	1.00	1.00	1689, 2002
III	7.13 (5.93-8.56)	0.86 (0.66-1.12)	0.91 (0.67-1.27)	1904, 2358
IV & V	7.23 (5.43-9.56)	0.87 (0.61-1.25)	0.87 (0.58-1.32)	853, 1020
No. of sexual partners in past 5 years		p<.00001	p<.00001	
0-1	2.00 (1.48-2.71)	1.00	1.00	2037, 2707
2-4	8.46 (6.84-10.42)	4.36 (2.95-6.43)	2.82 (1.83-4.34)	1419, 1634
5-9	11.59 (9.17-14.53)	6.55 (4.32-9.95)	3.64 (2.21-6.00)	708, 782
10+	26.03 (22.00-30.52)	17.69 (11.89-26.32)	8.75 (5.27-14.51)	531, 547
Homosexual partner in last 5 years		p<.00001	p<.00001	
No	6.78 (5.99-7.66)	1.00	1.00	4616, 5609
Yes	35.12 (26.83-44.41)	7.45 (4.93-11.25)	3.51 (2.14-5.75)	183, 166
Injected drugs in past 5 years		p<.00001	p=.018	
No	7.31 (6.50-8.21)	1.00	1.00	4787, 5745
Yes	27.62 (16.79-41.91)	4.84 (2.52-9.30)	2.81 (1.19-6.60)	59, 74
Paid for sex in past 5 years		p<.00001	p=.417	
No	7.00 (6.20-7.89)	1.00	1.00	4568, 5557
Yes	20.00 (14.50-26.93)	3.32 (2.21-4.99)	1.23 (0.75-2.02)	277, 262
New sex partners from other country/ies?		p<.00001	p=.303	
No	5.87 (5.09-6.76)	1.00	1.00	3699, 4730
Yes	19.48 (16.32-23.08)	3.88 (3.00-5.02)	1.19 (0.85-1.67)	822, 779

## FOOTNOTES:

A: EXCLUDES THOSE WHO REFUSED WHOLE SELF-COMPLETION OR DID NOT ANSWER WHETHER THEY HAVE ATTENDED A GUM CLINIC IN THE PAST 5 YEARS;

B: ADJUSTED FOR ALL DEMOGRAPHIC AND BEHAVIOURAL VARIABLES IN THE TABLE VIA LOGISTIC REGRESSION MODELLING



**Table 7-14 Reported GUM clinic attendance in the past 5 years, WOMEN  
(adjusting for age/region and marital status)**

	WOMEN			
	Prevalence % (95% CI)	Unadjusted OR (95% CI)	Adjusted <sup>b</sup> OR (95% CI)	BASE (UW, WT)
All respondents <sup>a</sup>	6.47 (5.83-7.18)	-	-	6598, 5682
Age		p<.00001	p=.0379	
16-24	9.26 (7.59-11.24)	1.00	1.00	1334, 1343
25-34	7.57 (6.53-8.76)	0.80 (0.61-1.05)	1.25 (0.88-1.76)	2692, 2200
35-44	3.60 (2.92-4.45)	0.37 (0.27-0.50)	0.82 (0.53-1.27)	2572, 2139
Region		p<.00001	p=.034	
Rest of Britain	5.70 (5.02-6.47)	1.00	1.00	4873, 4894
Greater London	11.27 (9.51-13.31)	2.10 (1.67-2.65)	1.39 (1.02-1.89)	1725, 788
Ethnic Group		p<.00001	p<.00001	
White	6.08 (5.42-6.82)	1.00	1.00	5498, 5232
Black Caribbean	21.15 (15.66-27.93)	4.14 (2.80-6.13)	4.92 (3.12-7.77)	336, 109
Black African	13.83 (8.97-20.72)	2.48 (1.50-4.10)	3.41 (1.74-6.68)	252, 60
Indian	7.05 (2.85-16.38)	1.17 (0.45-3.06)	1.89 (0.71-5.01)	192, 102
Pakistani	1.69 (0.60-4.70)	0.27 (0.09-0.77)	0.71 (0.16-3.15)	141, 41
Marital status		p<.00001	p=.1783	
Married	2.85 (2.23-3.63)	1.00	1.00	2672, 2610
Single	10.02 (8.58-11.69)	3.80 (2.80-5.16)	1.33 (0.85-2.09)	2122, 1543
Cohabiting	9.56 (7.75-11.75)	3.61 (2.57-5.08)	1.59 (1.02-2.47)	1031, 1072
Sep./ Widow. /Div.	7.69 (5.95-9.89)	2.84 (1.97-4.10)	1.49 (0.93-2.38)	765, 451
Social class		p=.9319	p=.8852	
I & II	6.68 (5.48-8.12)	1.00	1.00	1870, 1548
III	6.55 (5.59-7.67)	0.98 (0.75-1.28)	0.96 (0.71-1.31)	2607, 2302
IV & V	6.30 (4.98-7.94)	0.94 (0.68-1.30)	0.91 (0.63-1.32)	1278, 1140
No. of sexual partners in past 5 years		p<.00001	p<.00001	
0-1	2.29 (1.85-2.84)	1.00	1.00	3765, 3368
2-4	8.87 (7.48-10.48)	4.24 (3.18-5.67)	3.22 (2.25-4.63)	1869, 1495
5-9	18.67 (15.20-22.71)	9.92 (7.09-13.89)	7.04 (4.56-10.86)	541, 461
10+	29.56 (23.20-36.82)	18.34 (12.22-27.54)	12.06 (7.10-20.50)	239, 216
Homosexual partner in last 5 years		p<.00001	p=.007	
No	5.95 (5.32-6.64)	1.00	1.00	6342, 5482
Yes	25.04 (18.95-32.31)	5.28 (3.64-7.68)	1.73 (1.09-2.74)	199, 163
Injected drugs in past 5 years		p=.019	p=.653	
No	6.43 (5.79-7.14)	1.00	1.00	6571, 5660
Yes	18.39 (7.73-37.74)	3.28 (1.21-8.86)	0.63 (0.10-3.62)	25, 21
New sex partners from other country/ies?		p<.00001	p=.022	
No	5.60 (4.95-6.33)	1.00	1.00	5650, 5001
Yes	20.36 (16.56-24.77)	4.31 (3.23-5.76)	1.52 (1.06-2.18)	533, 385

## FOOTNOTES:

A: EXCLUDES THOSE WHO REFUSED WHOLE SELF-COMPLETION OR DID NOT ANSWER WHETHER THEY HAVE ATTENDED A GUM CLINIC IN THE PAST 5 YEARS;

B: ADJUSTED FOR ALL DEMOGRAPHIC AND BEHAVIOURAL VARIABLES IN THE TABLE VIA LOGISTIC REGRESSION MODELLING

**Table 7-15 Gender disparity odds ratios (95%CI)\* for key behavioural indicators by ethnic group**

INDICATOR	Gender disparity OR (95%CI)				
	White	Black Caribbean	Black African	Indian	Pakistani
Proportion reporting new sexual partner in past year	1.64 (1.48-1.82)	2.59 (1.50-4.48)	4.03 (2.21-7.36)	1.46 (0.70-3.06)	3.03 (1.14-8.06)
Proportion reporting condom use at last intercourse	1.41 (1.27-1.56)	1.46 (0.85-2.52)	1.34 (0.76-2.36)	2.16 (1.15-4.07)	1.51 (0.71-3.22)
Proportion ever diagnosed with an STI	0.86 (0.75-0.99)	0.84 (0.48-1.46)	1.18 (0.62-2.25)	0.42 (0.09-1.98)	0.88 (0.23-3.43)
Proportion ever having had an HIV test	1.10 (0.96-1.26)	1.15 (0.60-2.20)	0.66 (0.38-1.14)	0.93 (0.36-2.41)	0.97 (0.38-2.48)
New sexual partner from abroad in the past 5 years	2.24 (1.93-2.59)	1.25 (0.65-2.39)	5.52 (2.97-10.26)	1.38 (0.51-3.75)	1.83 (0.60-5.54)
Concurrent sexual partnerships in last year	1.63 (1.38-1.93)	2.50 (1.27-4.95)	8.89 (3.40-23.28)	2.30 (0.48-11.07)	8.18 (1.77-37.76)

Footnotes:

\* Gender disparity odds ratio (95% confidence interval) is the unadjusted OR for each indicator in which prevalence in men is compared to women (base) within each ethnic group.

Table 7-16 Odds ratios (95%CI) showing impact of acculturation among British and non-British born MEN

MEN	Proportion (95% CI) born in Britain	Odds ratio (95%CI) born in Britain	Odds ratio (95%CI) of reporting sex before 16 years of age	Odds ratio (95%CI) of reporting ever having had a homosexual partner	Born outside Britain	Born outside Britain
White						
35-44	94.5 (93.2-95.5)	1	$P=.723$	$P=.0005$	$P=.052$	1
25-34	93.4 (91.9-94.7)	0.83 (0.61-1.13)	0.91 (0.45-1.81)	0.83 (0.61-1.13)	0.67 (0.28-1.58)	0.67 (0.28-1.58)
16-24	95.9 (94.3-97.1)	1.38 (0.92-2.06)	1.28 (0.56-2.94)	0.42 (0.27-0.65)	0.14 (0.03-0.69)	0.14 (0.03-0.69)
Black Caribbean						
35-44	63.4 (41.6-80.8)	1	$P=.842$	$P=.076$	-	-
25-34	89.9 (77.8-95.7)	5.12 (1.41-18.57)	0.56 (0.06-4.87)	0.92 (0.13-6.54)	n.a.	n.a.
16-24	86.7 (72.8-94.1)	3.76 (1.08-13.03)	0.67 (0.08-5.59)	0.07 (0.01-0.98)	14.29 (0.61-332.10)	14.29 (0.61-332.10)
Black African						
35-44	30.2 (16.6-48.4)	1	$P=.124$	-	$P=.410$	1
25-34	37.5 (22.2-55.8)	1.39 (0.45-4.30)	2.29 (0.74-7.12)	3.17 (0.31-33.03)	5.81 (0.42-81.21)	5.81 (0.42-81.21)
16-24	42.5 (24.7-62.4)	1.71 (0.52-5.61)	3.64 (1.00-13.24)	n.a.	4.04 (0.22-74.14)	4.04 (0.22-74.14)
Indian						
35-44	17.1 (6.4-38.4)	1	$P=.303$	$P=.292$	-	-
25-34	42.9 (28.4-58.8)	3.65 (1.02-13.08)	0.75 (0.12-4.63)	0.20 (0.01-4.53)	0.26 (0.03-2.50)	0.26 (0.03-2.50)
16-24	84.0 (70.3-92.0)	25.42 (6.37-101.40)	4.95 (0.42-58.45)	1.29 (0.09-18.84)	n.a.	n.a.
Pakistani						
35-44	9.4 (1.4-42.6)	1	$P=.480$	-	-	-
25-34	52.4 (38.3-66.0)	10.59 (1.37-82.05)	5.04 (0.35-73.57)	n.a.	n.a.	n.a.
16-24	82.4 (71.1-89.9)	44.95 (5.54-364.79)	2.25 (0.11-45.30)	n.a.	n.a.	n.a.



Table 7-17 Odds ratios (95%CI) showing impact of acculturation among British and non-British born WOMEN

WOMEN	Proportion (95% CI) born in Britain	Odds ratio (95%CI) born in Britain	Odds ratio (95%CI) of reporting sex before 16 years of age		Odds ratio (95%CI) of reporting ever having had a homosexual partner	
			British born	Born outside Britain	British born	Born outside Britain
White		$P=.087$	$P<.0001$	$P=.987$	$P=.743$	$P=.281$
35-44	94.5 (93.4-95.4)	1	1	1	1	1
25-34	93.2 (92.0-94.3)	0.81 (0.62-1.05)	1.43 (1.19-1.71)	0.96 (0.44-2.09)	1.01 (0.75-1.36)	0.53 (0.23-1.24)
16-24	95.1 (93.6-96.3)	1.13 (0.80-1.59)	2.16 (1.78-2.61)	1.03 (0.41-2.59)	0.88 (0.61-1.27)	0.43 (0.09-2.05)
Black Caribbean		$P=.0002$	$P=.207$	-	$P=.719$	$P=.771$
35-44	70.2 (59.2-79.4)	1	1	1	1	1
25-34	90.5 (83.6-94.7)	4.06 (1.87-8.78)	0.50 (0.19-1.30)	1.69 (0.35-8.14)	0.76 (0.16-3.59)	1.52 (0.11-20.14)
16-24	95.5 (83.9-98.8)	8.92 (2.02-39.34)	1.11 (0.39-3.21)	n.a.	1.54 (0.19-12.47)	2.78 (0.16-48.85)
Black African		$P=.596$	$P=.042$	$P=.842$	$P=.969$	-
35-44	27.2 (16.9-40.7)	1	1	1	1	1
25-34	24.9 (16.1-36.3)	0.89 (0.38-2.09)	0.08 (0.01-1.09)	1.29 (0.43-3.89)	1.07 (0.07-16.08)	3.95 (0.40-39.24)
16-24	34.5 (19.9-52.8)	1.41 (0.55-3.66)	1.85 (0.15-22.64)	1.29 (0.38-4.42)	0.78 (0.04-14.87)	n.a.
Indian		$P<.0001$	$P<.0001$	-	-	-
35-44	10.4 (4.2-23.8)	1	1	1	1	1
25-34	55.7 (41.5-69.1)	10.82 (3.54-33.05)	349477 (2728-4477079)	0.73 (0.04-12.61)	n.a.	n.a.
16-24	91.9 (82.4-96.5)	97.75 (24.98-382.45)	2063407 -	n.a.	n.a.	n.a.
Pakistani		$P<.0001$	$P=.250$	$P=.315$	-	-
35-44	22.2 (8.5-46.6)	1	1	1	1	1
25-34	63.0 (48.4-75.5)	5.97 (1.65-21.58)	0.14 (0.01-2.33)	0.19 (0.01-1.91)	n.a.	n.a.
16-24	83.1 (72.7-90.1)	17.30 (5.11-58.56)	0.11 (0.01-1.56)	0.30 (0.02-5.04)	n.a.	n.a.

## **Section 3**

# **Discussion and Conclusions**

# Chapter 8.

## Discussion

### 8.1 INTRODUCTION

The work presented in this thesis addresses the issue of ethnic variations in the epidemiology of STIs in Britain through a consideration of the published literature and original quantitative and qualitative studies.

The findings may be divided into three broad categories. First, the consistency of findings across western industrialised settings, where such investigations have been undertaken. Second, the role of high-risk sexual behaviours as a key determinant of these outcomes. Third, the contribution of wider behavioural, social and economic factors to the observed differences.

This chapter summarises thesis findings related to the above issues and identifies the contribution of this work to our understanding of the relationship between ethnicity and sexual health. The findings are discussed within the context of the observational evidence summarised in Chapters 2 and 3. Methodological considerations for undertaking future studies are presented. Finally, recommendations are made for studies that could extend the work presented in the thesis, and significantly advance our current knowledge.

### 8.2 ETHNIC VARIATIONS IN DIAGNOSED STIS - A PHENOMENON OF WESTERN INDUSTRIALISED STATES?

The review of the relevant literature in Chapter 3 covered a range of countries, methods and outcomes. The majority of reviewed studies were undertaken in the US and Britain, and

within STD clinic settings (Anand & De La Court 1993;Boyer *et al.* 1999;Harawa *et al.* 2003;Harawa *et al.* 2004;Hart 1992a;Hart 1993;Hooykaas *et al.* 1991;Hudson 1998;Judson *et al.* 1980;Mbopi-Keou *et al.* 2000;Nagy, Hunt, & Adcock 1990;Ross 1998;Santelli *et al.* 2000;Slavinsky, III *et al.* 2000;Smith *et al.* 1999;Tanfer, Cubbins, & Billy 1995;Telzak *et al.* 1989). Relatively few studies involved population-based probability sample methodologies (Catania, Binson, & Stone 1996;Ford & Norris 1997;Gibson *et al.* 1990c;Johnson *et al.* 2001;Leigh, Temple, & Trocki 1993;Siegel *et al.* 1992), and there were few qualitative investigations (Aral 1996;Darroch, Myers, & Cassell 2003;Duncan *et al.* 2001;Greenhalgh, Helman, & Chowdhury 1998;Guinan 1993;Naranjo 1994;Rothenberg, Kimbrough, & Lewis-Hardy 2000;St Louis, Farley, & Aral 1996;Thomas *et al.* 2000) in the subject area. Finally, few studies involved participatory methods, or were undertaken by the researched communities themselves (Fenton *et al.* 2002;Kelly 2004;Macaulay, Commanda, Freeman, Gibson, McCabe, Robbins, & Twohig 1999).

Nevertheless, the literature review highlighted a number of consistencies in the findings related to variations in STI epidemiology, high-risk behaviours and service utilisation across ethnic or racial groups. Across most western industrialised states, *indigenous* (e.g. native Americans, Aborigines), or *post-slavery* (African American) ethnic groups (see Box 1, page 22) were more likely to experience poor sexual health outcomes compared to other ethnic minorities or the ethnic majority (Anand & De La Court 1993;Anderson, McCormick, & Fichtner 1994;Aral & Holmes 1990;Buzi, Weinman, & Smith 1998;Chirgwin *et al.* 1991;De Putter 1998;Division of STD Prevention 1999;Fleming *et al.* 1997;Gibson *et al.* 1990;Harawa *et al.* 2004;Hart 1993;Hayes *et al.* 2000;Hudson 1998;Hughes *et al.* 2001;Hutchinson *et al.* 1991;Irwin *et al.* 2000;Jonsson *et al.* 1997;Moran *et al.* 1989;Pabst *et al.* 1992;Ross 1998;Santelli *et al.* 2000;Short *et al.* 1984;Wright & Judson 1978). This may reflect the enduring contextual features of persistent economic disadvantage, social exclusion and racism in these societies (Bardot 1996;Bhopal 1998;Brandt 1978;Fenton 1999;Ficarrotto 1990;Hutchinson 1992).

In contrast, a heterogeneous effect was observed among *urban ethnic minorities* (e.g. in British, Western European cities). Better sexual health outcomes were observed among

those with more recent migratory experiences, from low prevalence areas, with less experience of racial discrimination, and for whom religion or religious affiliation were closely related to ethnic identity (Choi *et al.* 2003;Sanitioso 1999;Shapiro & Vives 2000). Poorer outcomes were described among ethnic groups with migration from high HIV/STI prevalence areas, subject to racial discrimination, or at the lower end of society's socio-economic scale (Del Amo *et al.*1996;Del Amo *et al.*. 1998;Fenton *et al.* 2001;Low, Paine, Clark, Mahalingam, & Pozniak 1996;O'Farrell *et al.* 1995).

Other consistencies were found in the ethnic distribution of prevalent diagnosed STIs. Higher rates of bacterial STIs were found in Black ethnic groups in the US and Britain (Daker-White & Barlow 1997;Division of STD Prevention 1999;Heckman *et al.* 1999;Hughes, Andrews, Catchpole, Goldman, Forsyth-Benson, Bond, & Myers 2000;Low, Sterne, & Barlow 2001;Risser *et al.* 2000;Rothenberg, Kimbrough, & Lewis-Hardy 2000;Shahmanesh *et al.* 2000;Thomas, Clark, Robinson, Monnett, Kilmarx, & Peterman 2000), with generally lower rates being observed in Asian ethnic groups (Choi *et al.* 2003;Sanitioso 1999;Shapiro & Vives 2000). Higher rates of HIV infection were found in Black ethnic groups, compared to others, in Europe and the US although the magnitude of in-country transmission varied by setting. The evidence on viral STIs is less robust, however higher rates of genital warts are found among Whites in Britain and the US compared with other groups (Anon. 1997;PHLS, DHSS&PS, & the Scottish ISD(D)5 Collaborative Group 2002;PHLS 2001;PHLS 2000), and HSV-2 prevalence studies suggest higher rates among Black ethnic groups than others (Boucher *et al.* 1990;Brinkworth & Elpern 1986;Christenson *et al.* 1991;Elder-Tabrizy *et al.* 1991;Fleming *et al.* 1997;Freedman *et al.* 1974;Gibson *et al.* 1990;Holmberg *et al.* 1988;Johnson *et al.* 1989;Lewis *et al.* 1999;Mertz 1993;Mulhall, Hart, & Harcourt 1995;Nicolle *et al.* 1986;Siegel *et al.* 1992).

However, there were number key differences across the reviewed studies. Country-specific differences exist in the definition, classification and recording of race and ethnicity in health statistics and research, and practices change over time (Afshari & Bhopal 2002;Bhopal 2002;Bhopal & Donaldson 1998;Bhopal & Rankin 1999;Fenton & Wellings 2001;Fenton 1999;Harry & Clark 1998;Johnson *et al.* 1994;McKenzie & Crowcroft 1994;Ross



1998;Senior & Bhopal 1994;Smaje 1995;Sondik *et al.* 2000;Weissman 1990;Williams 2002;Zenilman, Shahmanesh, & Winter 2001). Within each country, the distribution of ethnic minorities and patterns of sexual health service utilisation vary by site and ethnic group. These will influence the nature of the observed associations between ethnicity and diagnosed STIs. Studies exploring ethnicity and sexual health outcomes are more likely to be undertaken in urban, multi-ethnic, and socio-economically deprived settings (Evans *et al.* 1995;Harawa *et al.* 2004;Hart 1992;Hart 1993;Tanfer, Cubbins, & Billy 1995). This may consequently exacerbate differences between ethnic groups, especially where such deprivation disproportionately affects certain groups and is linked with risk behaviours.

### **8.3 DETERMINANTS OF ETHNIC VARIATIONS IN SEXUAL HEALTH OUTCOMES**

Taken in concert, the collated studies presented in this thesis provide compelling evidence for identifying a potential causal pathway through which ethnic variations in sexual health outcomes may be mediated. In Chapter 3, Ward's framework (the ethnic macro-social environment) provided a mechanism for understanding the complex interplay between the host, social and cultural ecology, and the infectious agent, which leads to observed patterns in disease incidence. However, although useful for identifying the range of factors influencing ethnic variations in sexual health, the framework neither provides guidance on the relative importance of these factors, nor helps us to prioritise or target interventions for improving sexual health.

An alternative way of conceptualizing the casual pathways through which STD transmission within ethnic groups are mediated, involves the identification of proximal determinants or risk factors (those related to the individual), and those more distal determinants (those related to the socio-cultural economic and political environment) which influence the dynamic patterns of spread of STIs through sexual networks and populations.

### **8.3.1 Proximal determinants of ethnic variations in sexual health outcomes**

The three proximal or direct determinants of the rate of spread of an STI pathogen are: (1) the probability of exposure of susceptible to infectious persons; (2) the mean efficiency of sexual transmission when such exposures occur and; (3) the mean duration of infectiousness of individuals who become infected.

Data from Natsal 2000, presented in Chapter 7, confirm that although the majority of the population does not engage in high-risk behaviours, considerable variations in the prevalence of risk behaviours do exist across broad ethnic groups. The Mayisha study (Chapter 6) further suggested that similar variations within ethnic groups, between nationalities might be also observed. Such behavioural differences are important; because models of STD transmission dynamics and population based studies all confirm the importance of sexual mixing patterns (or networks) and the upper end of the partner distribution as important determinants of the epidemiology of STIs.

The determinants of efficiency of sexual transmission include host susceptibility, the infectious virulence of the pathogen, and the concentration of pathogens shed in semen or genital fluids. The type of sexual exposure (i.e. sexual practices) influence susceptibility dependent upon the anatomical site exposed. The infectivity of a person may be related to the inoculum size delivered and the infectious virulence of the pathogen. Concurrent STIs (including HIV infection) may interact with each other and influence transmission risk, thereby also acting as a proximal determinant of STI transmission and acquisition.

The duration of infectivity is dependent upon the natural history of each type of STD as well as on the intrinsic efficacy and use-effectiveness of chemotherapeutic or immunity-enhancing approaches to shortening the duration of infectiousness. In conceptualising interventions aimed at improving sexual health, the proximal determinants are likely to have a very powerful impact on STD transmission risk.

### **8.3.2 Distal determinants of ethnic variations in sexual health**

The social and cultural ecology referred to by Ward, and discussed in Chapter 3, will have a more distal impact on sexual health, exerting their influence through the more proximal

determinants identified above. Demographic, economic, social and political change can create social instability at the level of individuals, their partnerships, sexual networks and communities resulting in changing patterns of sexual mixing among all groups and categories of people, including those with and without STDs.

The following sections discuss in some detail, findings related to the relative roles of proximal (high risk sexual behaviour, sexual mixing patterns) and distal determinants (culture, religion, racism and discrimination) of sexual health among ethnic minorities.

## **8.4 HIGH-RISK SEXUAL BEHAVIOUR**

The thesis confirmed that in Britain, the patterns and distribution of high-risk sexual behaviour remain the most important determinant of an individual's (and community's) risk of STI acquisition, and that substantial variations in the distribution and prevalence of high-risk sexual behaviours exist across ethnic groups. The most robust evidence for these behavioural differences were obtained from Natsal 2000 (Fenton *et al.* 2001; Johnson *et al.* 2001; Wellings *et al.* 2001), which also validated findings from GUM and community studies.

### **8.4.1 Black Caribbean and Black Africans in Britain**

One of the most striking findings of the thesis was the increased behavioural risk reported by men from Black Caribbean and Black African communities relative to other ethnic groups in Britain. This further refined previous reports of increased risk behaviour and bacterial STIs among Black groups in Britain (Evans *et al.* 1998; Evans, Bond, & MacRae 1998; Hughes *et al.* 2000; Lacey, Merrick, Bensley, & Fairley 1997; Shahmanesh *et al.* 2000; Winter *et al.* 2000). Key features identified in Natsal 2000 related to their reported earlier coitarche; higher numbers of lifetime and recent partners; higher prevalence of concurrency; and lower levels of reported condom use. These findings confirm those from the GUM clinic survey of first-time attenders as well as the MAYISHA study among African communities.

The significance of high-risk behaviour on STI risk should not be underestimated. In Natsal 2000, approximately one in 10 individuals reporting 10 or more partners in the past five years reported having been diagnosed with an STI. So too were those reporting a homosexual partner, paying for sex and having sex with a partner from another county in the past five years. In the multivariate analysis, the strongest determinant of STI risk was the number of reported sexual partners in the past five years (adj. OR 17.01), compared to those reporting zero to one partners during this time. An examination of the distribution of high-risk behaviours in men (Table 7-5, page 200) confirms that Black Caribbean and Black African men had a substantially higher prevalence of many of these key behaviours compared to other ethnic groups.

Among women, although Black Caribbean and White women had similar behavioural risk profiles, Black African women (despite their increased STI risk) reported relatively lower prevalences of risk behaviours. Whether this finding reflects some reporting bias is uncertain. The increased STI rates among Black African women may suggest that either under-reporting of risk behaviours is occurring (Copas *et al.* 2002; Copas & Farewell 1997; Johnson *et al.* 2001), or the high rates experienced by Black African women are a consequence of the risk experienced by Black African men. The latter explanation is particularly plausible given the relatively higher rates of assortative sexual mixing seen within this group. Data from the qualitative ExES study suggest that features of recently migrant African women including their strong religious beliefs, conservative social values regarding sex, and higher educational and social attainment could also contribute to their lower behavioural risk profile.

The reasons for the markedly elevated behavioural risk among Black ethnic groups in Britain are many. Cultural norms related to male sexual behaviour, including concurrency and earlier coitarche were highlighted in the ExES study in Chapter 5. They are in turn located within more relaxed attitudes and beliefs regarding sexual attitudes and practices (with the exception of homosexuality), coupled with ambivalent attitudes towards safer sex, condom use and risk practices - particularly among Black Caribbean men. Among Black African men, this finding was somewhat attenuated by the impact of HIV/AIDS on African

communities, which led to some individual reflection on the consequences of behavioural risk. Religious influence on behaviour among Black Caribbean communities was less evident than among Black Africans however, and where present, uniformly resulted in more conservative attitudes and behaviours.

#### **8.4.2 Ethnic groups at lower risk**

Another consistent feature of this investigation was the relatively lower behavioural risk reported by Indian subcontinent ethnic groups (Indian, Pakistani and Bangladeshi), compared to other major ethnic groups in Britain. This had been suggested in a handful of prior studies (Evans *et al.* 1995; Evans *et al.* 1998; Evans, Bond, & MacRae 1998), although none had unpacked differences within the broad 'Asian' ethnic group. In the GUM clinic survey and Natsal 2000, relatively lower numbers of lifetime and recent sexual partners, low rates of partner acquisition, lower prevalence of concurrency and paying for sex were reported by Indian and Pakistani respondents compared with others. This was generally accompanied by more conservative attitudes and beliefs regarding sexual lifestyles and practices, with strong religious influences on behavioural norms, particularly among older, non-British born individuals.

However, in addition to the lowered behavioural risk profiles, other features of these communities proved protective of sexual health. Unlike many ethnic groups, the gender disparity in risk behaviours were substantially lower than other ethnic groups i.e. men and women within Indian and Pakistani communities reported similar lowered behavioural risk, unlike most other ethnic groups. A finding that had not been reported elsewhere. Secondly, sexual mixing within these communities was highly assortative with approximately 80% of Indians and 90% of Pakistanis reporting living with partners from their own communities (Table 7-8a and 7-8b). Taken together, these findings suggest the possibility of community-level factors (Aral *et al.* 1991; Aral 1996; Aral *et al.* 1999; Aral 1999; Aral 2000; Aral & Cates 1989; Laumann, Youm, & Aral 2000), akin to a 'herd immunity', which may protect individuals within these ethnic communities from sexual ill health.

## 8.5 DISTAL DETERMINANTS OF ETHNIC VARIATIONS IN SEXUAL HEALTH

Although high-risk sexual behaviour is a major determinant of STI risk, the collated studies confirm that this alone cannot entirely explain the unequal distribution of STIs observed across ethnic groups. In the Natsal 2000 study, the elevated disease risk experienced by Black Caribbean and African ethnicities persisted even after controlling for number of reported partnerships. This suggests that other factors may be contributing as suggested in Chapters 3 (see Box 3, page 66). The thesis used different methods to explore some of these additional factors.

### 8.5.1 Background disease prevalence

In contrast to other infectious diseases, STIs are distinct by virtue of the fact that they only infect sexually active individuals (many of whom are asymptomatic when infected and consequently do not receive treatment) and the bacterial STIs confer little acquired immunity following recovery (Abraham & Sheeran 1994; Anderson & Garnet 2001; Aral, Soskoline, Joesoef, & O'Reilly 1991; Aral 1996d; Aral *et al.* 1999; Aral 1999; Aral 2000; Aral & Cates 1989; Balasubramanian & Ravindran 1979; Brunham & Plummer 1990; Catania, Kegeles, & Coates 1990; Engen 1992; Laumann, Youm, & Aral 2000; Robinson *et al.* 1999). Mathematical models describing the biology of host-microparasite associations suggest that the probability that a given susceptible host will become infected in a given time interval (the 'force of infection' ( $\lambda$ ) or per capita rate of acquisition of infection), is linearly proportional to the total number of infectious individuals in the population (Anderson & Garnet 2001; Bell & Trevino 1999; Engen 1992; Garnett & Anderson 1996). Thus, observed ethnic variations in sexual health outcomes may be a function of the long-term maintenance of, or failure to effectively reduce, disease prevalence within specific groups. Among Black ethnic groups in Britain, this may result from a number of factors:

- 1) **Failure of STI prevention and control efforts within Britain's Black communities.** The high rates of reported prior STIs and STI re-infection seen among Black Caribbean and Black African GUM attenders suggest a failure of

secondary prevention efforts. Yet despite this there have been no specifically tailored trials of STI or HIV risk reduction interventions undertaken regarding with Black communities in Britain. This is in contrast to the US where such trials have increasingly been undertaken with African American women, and men who have sex with men (Branson, Moore, & Byers 1996; Cleary *et al.* 1995; Crosby *et al.* 2000; Crosby *et al.* 2003; DiClemente *et al.* 2004; DiClemente & Wingood 1995; Jemmott, III, Jemmott, & Fong 1998; Kamb *et al.* 1996; Landis *et al.* 1992; Pedlow & Carey 2004; Peterman *et al.* 2000; Schonfeld *et al.* 1995; Shain *et al.* 1999; Sikkema *et al.* 2001; Sormanti *et al.* 2001; Stanton *et al.* 1996; Sterk *et al.* 2003; Wisdom *et al.* 2002). More recent studies have suggested delays in access to care (Burns *et al.* 2004; Burns *et al.* 2004; Burns *et al.* 2001; Del Amo *et al.* 1996; Del Amo *et al.* 1998); differential partner notification outcomes and variations in the offer of HIV testing among ethnic groups (Burns *et al.* 2002; Burns *et al.* 2004), which may have a negative impact on disease control.

- 2) **Continued in-migration of infected individuals from areas of high prevalence (Caribbean, sub-Saharan Africa).** Continued immigration introduces new susceptible and infected individuals to the ethnic communities. National HIV and STI surveillance data suggest that recent migrants account for the majority of HIV and syphilis infections acquired heterosexually (Del Amo *et al.* 2004; Dougan *et al.* 2004; Low 2004; Sethi *et al.* 2004; The UK Collaborative Group for HIV and STI Surveillance 2004). Where sexual mixing is highly assortative (Aral *et al.* 1999; Aral 2000; Barlow, Daker-White, & Band 1997; Choi *et al.* 2003; Low, Sterne, & Barlow 2001), in-migration of infected individuals may further drive endogenous disease transmission.

In-migration also results in a replenishment of susceptibles who may have different normative behaviours and attitudes related to safer-sex and behavioural risk (De Putter 1998; Gostin *et al.* 1990; Gras *et al.* 2001; Willcox 1965). In the MAYISHA study, recent migrants were more likely to report high behavioural risk profiles than those who had been resident in the United Kingdom for longer periods, even after

controlling for age. No other studies had shown this previously. In the ExES study, recent migrants showed very strong adherence to attitudes and beliefs of their countries of origin. Among recently migrant Jamaicans, the prevalent norms appeared more supportive of multiple and concurrent partnerships and more censorious of homosexual partnerships than those who were resident for longer periods, or born in the United Kingdom.

- 3) **UK-born or resident individuals mixing with partners from high-prevalence countries (within or outside of the United Kingdom).** Data from MAYISHA and Natsal 2000 confirm marked ethnic variations in the prevalence of reported new overseas partner acquisition. However, STI acquisition risk in this setting is dependent upon the partner's ethnicity, disease prevalence in their country of origin, and prevalence of safer sex behaviours (Daniels *et al.* 1992; Hawkes *et al.* 1992; Hawkes *et al.* 1994; Morrison 1993; Mulhall 1996). Thus, STI acquisition risk resulting from assortative sexual mixing between Black Africans (whether in the United Kingdom or in sub-Saharan Africa) may be substantially higher than for Europeans (in the United Kingdom or in Europe), given the higher background STI/HIV prevalences in many African countries. Further exploration of these patterns of sexual mixing are now required and are planned as part of the Natsal 2000 analyses.

### **8.5.2 Patterns of service utilisation**

The studies in this thesis confirm previous findings of the over-representation of Black ethnic groups in local and national GUM clinic attendance, and their disproportionate burden of diagnosed STIs (Champion & Ross 1999; Evans *et al.* 1998; Evans, Bond, & MacRae 1998; Foley *et al.* 2001; Hughes *et al.* 2000; Hughes *et al.* 2000; PHLS 2002). In Chapter 5, the qualitative study suggested that, especially among Black Africans and Black Caribbeans, the increased GUM attendance reflected health seeking behaviours of the symptomatic *as well as* the asymptomatic, who were very aware of STIs and proactively used GUM services for STI screening.



This increased likelihood of GUM clinic attendance by Black ethnic groups has been described in other community-based studies (Lacey, Merrick, Bensley, & Fairley 1997; Low, Daker-White, Barlow, & Pozniak 1997; Shahmanesh *et al.* 2000), confirmed in Natsal 2000, and may contribute to an over-representation of these communities in surveillance statistics (Low 2004; Low, Sterne, & Barlow 2001). This is particularly relevant in the United Kingdom where the cornerstone of our aggregate (KC 60 reports) and disaggregate STI surveillance data are based on returns from GUM clinics (PHLS 2002; The UK Collaborative Group for HIV and STI Surveillance 2004). Similar considerations must also be given to surveillance data from STD clinics in the United States, which generally serve socio-economically deprived ethnic minority communities (Centers for Disease Control and Prevention 2004). Surveillance data generated from these settings may over-represent diagnoses in ethnic minorities.

Conversely, failure to systematically record STI diagnoses made in other settings (e.g. primary care, family planning, private sector etc) may bias STIs diagnoses reporting in other ethnic groups, if there are ethnic differences in attendance patterns to these settings. The ExES study confirmed British Asian communities' preference to access general practitioners for initial sexual health care – a finding previously reported for other health conditions (Griffiths *et al.* 2001; Hull *et al.* 2001; Jones *et al.* 2004). As most viral STIs (and increasingly genital chlamydia) seen in this setting are not referred to GUM clinics (Catchpole *et al.* 1999; Fenton *et al.* 2001), this may underestimate the true disease burden in these communities.

### **8.5.3 Cultural and religious background**

The qualitative ExES study presented in Chapter 5 illustrated the changing yet enduring effect of an individual's ethnic and cultural heritage on sexual attitudes and lifestyles. The study concluded that there was no single association between ethnicity and sexual health, but that this relationship is likely to be mediated by a variety of factors including age, acculturation, religion, sexuality, socio-economic status, and the individual's own interest in sexual matters.

An individual's cultural background may play a substantial role in defining acceptable behavioural norms and experiences (Davis & Lay Yee 2001;Fenton 1999;Seibt *et al.* 1995;Wolffers 1997). Among young British-born men of Jamaican heritage, cultural norms related to early sexual debut, concurrent partnerships, and multiple partnerships as part of male sexual identity are being maintained (Brody, Ottey, & LaGranade 1974;Kamara *et al.* 2000;Le Franc *et al.* 1996;Simeon *et al.* 1999;Smith *et al.* 2003). Similarly among Indian and Bangladeshi men, cultural and religious norms related to delayed sexual debut, sexual activity within the context of marriage, and monogamy were undoubtedly driving the observed lower behavioural risk profiles (Asthana & Oostvogels 2001;Bhattacharya 2004;Khan 2001;Kootikuppala *et al.* 1999;Selvan *et al.* 2001). In all ethnic minority communities, individual adherence to these cultural values were influenced by the degree of acculturation, social integration, and educational attainment.

Religious beliefs may play an important role in fostering and maintaining protective (for sexual health) behaviours (Gray 2004;McCree *et al.* 2003;Naidu 1997;Nicholas & Durrheim 1995;Takyi 2003). Among many of Britain's Muslim communities, Islam remains a dominant part of people's everyday lives, and so too the religion's prescriptions on sexual contact, conduct and interaction (Elam, Fenton, Johnson, Nazroo, & Ritchie 1999). Among the predominantly Hindu Indian communities, religion also plays an equally strong role, but the research suggests that wider community and family-based norms and expectations, particularly around social behaviour and conduct, living up to parental expectations, and 'avoiding shame' on the family are equally important (Elam, Fenton, Johnson, Nazroo, & Ritchie 1999).

#### **8.5.4 Socio-economic status**

Income inequality may affect sexual health in three main ways. It may lead to under-investment in human capital; and income disparities may disrupt social fabric and social capital; income disparities may directly influence social and psychological pathways which influence sexual health and risk behaviours (Krieger 2000;Santelli *et al.* 2000). In the United States, reviewed studies suggest a very strong association between socio-economic status, social deprivation and the distribution of diagnosed and prevalent STIs (Ellen *et al.*

1995;Krieger *et al.* 1993;Santelli *et al.* 2000;Zierler *et al.* 2000).

Although STIs are highly clustered in urban metropolitan areas in Britain (Fenton *et al.* 2001;The UK Collaborative Group for HIV and STI Surveillance 2004), the assembled studies failed to show any similar association between socio-economic deprivation and sexual ill-health. Natsal 2000 confirmed marked differences in the social class distribution across the ethnic groups. However, we found no statistically significant association between social class and reported STIs in either men or women. Similarly using measures of social deprivation failed to find uncover any consistent association with STI risk. In the United Kingdom, there is evidence to support a general under-provision of GUM services which has resulted in delayed waiting times for routine and emergency appointments (The UK Collaborative Group for HIV and STI Surveillance 2004). Marked geographic variations exist, with waiting times being worse outside of London, particularly in the North West and North East of England(The UK Collaborative Group for HIV and STI Surveillance 2004). Whether however longer waiting times are associated with socio-economic deprivation will need further unpacking.

Although attempts were made to do so, failure to adequately take into account and accurately measure socio-economic status (individual, household, or neighbourhood), and time period (adult or childhood) can introduce bias and produce considerable residual confounding (see below) (Krieger 2000;Santelli *et al.* 2000).

### **8.5.5 Racism and discrimination**

One factor which has not been accounted for is the role of discrimination (Krieger 2000;Modood T, Berthoud R, Lakey J, Nazroo J, Smith P, & Virdee S 1997;Nazroo 1998), both in its economic consequences as well as the psychosocial consequences of being treated as a second-class citizen at every economic level. As such, stigma, discrimination and racism form part of the distal determinants of sexual health. Diaz *et al.* (2004) used data from a probability sample of 912 Latino gay men in 3 U.S. cities, to test a multivariate model of sexual risk, including experiences of homophobia, racism, and poverty as predictors. Participants reported multiple instances of verbal and physical abuse, rude

mistreatment, and discrimination on account of their sexual orientation and their race or ethnicity. Many reported experiences of poverty, such as inability to pay for basic necessities of food or shelter. Men who reported more instances of social discrimination and financial hardship were more psychologically distressed and more likely to participate in "difficult" sexual situations. Participation in difficult sexual situations mediates the effects of social oppression and psychological distress on sexual risk behavior.

Studying discrimination as a determinant of sexual ill health is difficult, however Kreiger proposes three methods for studying discrimination (Kreiger 2000) (see Box 24). This thesis exemplifies the indirect method and leads us to consider whether discrimination may be inferred as a possible explanation for the remaining disparities (assuming no other unmeasured confounders). The assembled studies in this thesis are useful in highlighting the health effects of discrimination (STI diagnoses, high-risk behaviours) and to show whether economic disparities account for observed differences in health between dominant and subordinate groups. However, they provide only indirect evidence and cannot directly measure the direct experiences or impact of discrimination. Future studies on the relationship between discrimination and sexual health are now an urgent priority.

**Box 24. Three main epidemiologic approaches to studying the health effects of discrimination (Kreiger 2000)**

Method	Description
1) Indirect, at individual level	Examine whether known risk factors explain differences in health outcomes between members of dominant and subordinate groups; if not infer discrimination may contribute to residual difference
2) Direct, at individual level	Among the subordinate group, examine whether self-reported experiences of discrimination are associated with a specific health outcome
3) Institutional, at population level	Among subordinate group, examine whether group-level measures of discrimination are associated with population rates of health outcome.

### 8.5.6 Residual confounding factors

The findings above clarify a potential causal pathway for ethnic variations in sexual health. STD transmission within ethnic groups is influenced by numerous interconnected factors that each operate at different levels – proximally and distally. An individual's STD transmission and acquisition risk is influenced by biological and behavioural factors. The

individual's risk is further influenced by their sexual partnerships and the sexual networks within which these partnerships occur. In turn, individuals, their partners, and the sexual networks from which partners are drawn are all embedded within various sub-communities, that together constitute the affected population. Each level is also influenced by social, behavioural, and biomedical factors such as the response of public health services and interventions.

A consistent finding of the assembled studies is the persistent association of STI acquisition risk among Black ethnic groups even after controlling for key confounders including age, marital status, sexual behaviour and injecting drugs. This would suggest that either a true association exists between Black ethnicity and STI acquisition risk (independent of behaviour) or that:

- 1) Individual level behavioural data do not fully capture variations in risk due to differing STI transmission dynamics in different social groups. As mentioned earlier, if group levels of risk behaviour, detailed patterns of sexual networking (concurrency etc.) or adequacy of treatment lead to a high background STI prevalence in a particular social group, then members of that social group will be at a higher risk of STI acquisition, even if their own individual risk behaviour is "low risk".
- 2) Inadequate measurement of existing variables e.g. socio-economic status, sexual behaviour, sexual mixing patterns, produced residual confounding (Krieger 2000; Santelli *et al.* 2000). However, these distal determinants most likely act via more direct determinants of sexual risk behaviour or health service utilisation.
- 3) The remaining differences reflect the health consequences of unmeasured non-economic aspects of racial discrimination (e.g. chronic stress, fatalistic behaviours) (Krieger 2000; Modood T, Berthoud R, Lakey J, Nazroo J, Smith P, & Virdee S 1997; Nazroo 1998).
- 4) The unexplained differences reflect unmeasured factors that are associated with rate/ethnicity and the specified outcome, but not related to discrimination or

socioeconomic position (e.g. cultural specific practices) (Elam, Fenton, Johnson, Nazroo, & Ritchie 1999;Fenton 1999;McKenzie & Crowcroft 1994;Senior & Bhopal 1994).

- 5) Finally, but rarely tested, that innate genetic differences are responsible(Ward 2001).

## **8.6 METHODOLOGICAL IMPLICATIONS**

The research presented in this thesis began within the context of growing public health interest in health inequalities, ethnicity and health, and sexual health. This section highlights key methodological developments and insights arising from this work which should improve further work in this field.

### **8.6.1 Using ‘ethnicity’ in sexual health research**

Arising from this work are key recommendations on the use of ‘ethnicity’ and ‘race’ in sexual health research, and are summarised in Box 25 overleaf. They relate to good practice in the derivation of epidemiological variables and in the analysis and interpretation of data.

#### **Epidemiological variables**

The literature review confirmed the growing dissatisfaction and limitations of using ‘race’ as a variable in research of this nature (Afshari & Bhopal 2002;Bhopal 2002;Bhopal & Rankin 1999;Fenton & Johnson 1997;Harry & Clark 1998;McKenzie & Crowcroft 1994;Ross 1998;Smaje 1995;Weissman 1990;Wyatt 1991). Current consensus is that it has neither scientific value nor public health utility. Therefore any future use of ‘race’ as an epidemiologic variable for exploring variations in sexual health outcomes should be strongly discouraged.

Although continuously evolving, recommended standards for measuring ethnicity are preferred, and should be used at all times. In Britain, the national census categories

(National Statistics 2004) may provide an independent reference point for defining and measuring ethnicity. It also ensures that denominators and reference populations are available for calculating population rates, geographic distribution, or for statistical weighting purposes. Collapsed or extended versions of the ethnicity classification may be required depending upon the nature of the investigation.

The collated studies confirm heterogeneity across *and within* the main ethnic groups. Future researchers should be aware that in studying sexual attitudes and lifestyles, 'ethnicity' may hide substantial national, regional and tribal differences which may impact on the outcome of interest (Fenton *et al.* 2002). Exploration of these variations may be required depending upon the nature of the study.

The evolving nature of STI epidemics means that the natural tendency to focus on the 'main' ethnic minorities may be superseded by public health imperatives to investigate smaller groups within a STI 'core' or 'transmission' network. Thus, recent in-migration of individuals from the horn of Africa may mean that future HIV research among African communities may need to take into account the distinct needs of individuals from this world region. Similarly, escalation of HIV in the Indian sub-continent may drive the need for more specific classification (whether on ethnic or religious grounds) to help target sexual health promotion messages.

**Box 25. Recommendations on the use of 'ethnicity' and 'race' in sexual health research arising from this work**

- 1) The continued use of "race" for exploring variations in sexual health outcomes should be strongly discouraged. It has no scientific value nor public health utility.
- 2) Recommended standards for measuring ethnicity (e.g. that used in the national census) should be used at all times. Collapsed or extended versions may be required depending upon the nature of the investigation.
- 3) Be aware that for studying sexual attitudes and lifestyles, 'ethnicity' may hide substantial national, regional and tribal differences which may impact on the outcome of interest.
- 4) The evolving nature of STI epidemics means that the natural tendency to focus on the 'main' ethnic minorities may be superseded by public health imperatives to investigate smaller groups within a STI "core" or "transmission" network .
- 5) Comparative analyses across ethnic groups, usually with the ethnic majority, is useful, however is not essential. Appropriate population and clinic-based reference populations

and studies in sexual attitudes and lifestyles now abound.

- 6) Gender disparities in sexual attitudes and lifestyles means that results on outcomes of interest should be stratified by this variable wherever possible.
- 7) Migratory history and acculturation are important influences on sexual attitudes and lifestyles and should be measured wherever possible. 'Country of birth', 'country of residence between 10 and 16 years', and 'length of residence in the United Kingdom' are three examples.
- 8) Socio-economic differences should be considered as an explanation for differences in sexual health outcomes between groups. More robust measures of social class and social deprivation are needed.
- 9) Discrimination remains an underlying and difficult-to-measure factor in determining sexual attitudes and lifestyles. More direct measures are needed.
- 10) Individual level behaviours are located within the context of a sexual network. Research in this field should keep abreast of developments in the quantitative and qualitative measurements of social and sexual networks.

Much of the work presented in this thesis compared attitudes, behaviours and outcomes across ethnic groups. This was particularly useful given the exploratory nature of the work and the lack of studies in this field. Comparative analyses across ethnic groups, usually with the ethnic majority, is useful, however is not essential. Appropriate population and clinic-based reference populations and studies in sexual attitudes and lifestyles now abound (Elam, Fenton, Johnson, Nazroo, & Ritchie 1999; Fenton *et al.* 2001; Fenton *et al.* 2001; Johnson 1996; Wellings *et al.* 2001). Much may be gained by doing detailed studies of one ethnic group in its own right. More important is that standardised methodologies or measures of ethnicity and other epidemiological variables are used so that comparison with other studies or populations may be undertaken. The National Survey of Sexual Attitudes and Lifestyles 2000 (Fenton *et al.* 2001; Johnson 1996; Wellings *et al.* 2001) provides an excellent source of material for this purpose and research should be guided to adopting or adapting these in the first instance.

### **Analysis and presentation of data**

Gender differences in sexual attitudes and lifestyles means that results on outcomes of interest should be stratified by this variable wherever possible. There is no place for presenting data for an ethnic group as a whole. Wherever possible, stratification by age-



group is also ideal, given the very strong association between age and high-risk sexual behaviours (Fenton *et al.* 2001;Johnson 1996;Wellings *et al.* 2001).

### **Interpretation of findings**

Migratory history and acculturation are important influences on sexual attitudes and lifestyles and should be measured wherever possible (Del Amo J. *et al.* 2001;Del Amo *et al.* 1998;Del Amo *et al.* 2004;Fenton *et al.* 2002). 'Country of birth', 'country of residence between 10 and 16 years', and 'length of residence in the United Kingdom' are three examples. This may be particularly useful for helping those working in sexual health promotion to refine and target sexual health messages.

Although the collated studies failed to show any impact of social class on sexual health outcomes, this should not be seen as an absence of effect. Socio-economic differences should be considered as an explanation for differences in sexual health outcomes between groups (Krieger 2000;Santelli *et al.* 2000). More robust measures of social-class and social deprivation are needed.

Discrimination remains an underlying and difficult to measure factor in determining sexual attitudes and lifestyles (Krieger 2000;Modood T, Berthoud R, Lakey J, Nazroo J, Smith P, & Virdee S 1997;Nazroo 1998). More direct measures are needed. More work is currently being done to identify instruments for measuring self-reported experiences of discrimination (racial, gender, sexual orientation, and disability) (Krieger 2000). Although generally employed to examine mental health outcomes, these studies confirm the association between self-reported experience of discrimination and poorer outcomes, and may provide the basis for future research in sexual health. Consistency will be required on the best variable(s) to employ, the time period of exposure, intensity and frequency of exposure, and targets of discrimination.

Finally, researchers should bear in mind that individual-level behaviours are always located within the context of a social and/or sexual network (Boily & Masse 1997;Engen 1992;Ghani, Swinton, & Garnett 1997;Johnson 1996;Morris 1997;Morris, Zavisca, & Dean 1995;Power *et al.* 1995;Reinking *et al.* 1994;Renton *et al.* 1995;Rothenberg, Kimbrough, &

Lewis-Hardy 2000;Service & Blower 1995;Stoner, Whittington, Hughes, Aral, & Holmes 2000;Toomey & Rothenberg 2000;Yirrell *et al.* 1998). Research in this field should keep abreast of developments in the quantitative and qualitative measurements of social and sexual networks. Specifically, work looking at sexual mixing between activity classes, the influence of the structure and patterns of the sexual network, and methodological work to develop quantitative and qualitative measures of these phenomena will be highly relevant to the development of this field.

## **8.7 SUMMARY**

This chapter aimed to draw together findings from studies presented in Section 2, discussing them within the context of previously published studies. Information on the advances made in our understanding of the relationship between race, ethnicity and sexual health, and the associated methodological issues, have been presented.

# Chapter 9.

## Conclusions

### 9.1 SUMMARY OF KEY FINDINGS

I started my investigations with an overview and analysis of our current understanding of the role and contribution of ‘race’ and ‘ethnicity’ to variations in sexual health. The key objectives of this investigation were to: Place the use of ‘race’ and ‘ethnicity’ as variables in epidemiological research into historical context and justify their continued use for this investigation; Undertake a comprehensive review of available literature on race, ethnicity and culture as it relates to sexual health outcomes; Describe ethnic variations in sexual health outcomes among black and ethnic minority communities within clinical and community settings in Britain; and make recommendations for improving sexual health interventions and research with black and ethnic minorities.

Four original studies were developed to explore and quantify the nature and range of *ethnic* variations in sexual health outcomes in Britain. They described the existence of variations in the prevalence of diagnosed STIs among Britain’s main ethnic groups. The inequalities are found across a variety of settings (GUM clinics in Chapter 4; community settings in Chapters 5 and 6; and general population in Chapter 7) for reported and prevalent diagnosed STIs. Compared with the ethnic majority, adverse sexual health outcomes (including STI diagnosis, STD clinic attendance, abortion and early sexual debut) were more prevalent among Black African and Caribbean ethnic groups, and less so among Indians and Pakistanis.

The studies also highlighted significant differences in the prevalence and distribution of high-risk sexual behaviours within and across ethnic groups (Chapters 6 and 7 respectively). Irrespective of the study setting, consistently higher numbers of lifetime, recent, concurrent

and new partners were reported Black African and Caribbean men compared to other ethnic groups. Men from the main Black ethnic groups were also less likely to report condom use at last intercourse. Generally higher sex partnerships were reported by White and Black Caribbean women compared to women in other ethnic groups (Chapter 7).

Although reported sex partners in past 5 years was the strongest determinant of reported STI diagnosis, controlling for this factor did not remove the association between Black ethnic groups and STI diagnosis risk (Chapter 7). This suggests that either other, inadequately measured factors, including patterns of health seeking behaviour, genetic susceptibility, patterns of sexual mixing, socio-economic status and background prevalence of disease may be mediating this relationship. Alternatively, unmeasured factors such as racism and discrimination, may also be contributing to the observed inequalities.

## **9.2 PERSONAL ACCOUNT**

Bhopal suggests that investigators should recognise the potent influence of their own personal values, including ethnocentricity (Bhopal 1998). As a Black British researcher of Caribbean heritage I had a personal motivation for exploring and verifying the evidence for ethnic variations in sexual health. In part this reflected my own academic interest in the field, however also a desire to understand, confront and combat, racist assumptions about the sexuality and behaviours of ethnic minorities in Britain. This may have exerted some influence on the types of studies developed in this thesis and in the interpretation of their results.

Although aiming to be inclusive in the types of studies reviewed and undertaken, it has taken a predominantly epidemiological and disease-based approach in considering the nature and aetiology of the relationship. Few socio-anthropologic studies on the subject were found in the published literature. Similarly, the majority of studies undertaken in this thesis were largely quantitative in nature. Nevertheless, the insight provided by the community-based qualitative study (Chapter 5) contributed greatly to my understanding of the social contexts surrounding the observed epidemiological association.

Through the course of designing, running and analysing various studies in this work, I have learned that the succinct presentation of results may conceal the efforts of all involved.

There were a lot colleagues involved in the implementation of the various studies. I learnt the importance of collaborative working with a range of multi-disciplinary colleagues, and the importance of involving collaborators early and fully in the research process. This was particularly important for those studies in which community participation was a key.

Undoubtedly, developing such personal relationships was key to the success of these studies, as evidence by participation rates and their completion through to publication.

### **9.3 IMPLICATIONS FOR FUTURE WORK AND INTERVENTIONS**

A number of findings arising from this work are relevant to future public health practice and research aimed at improving the sexual health of Black and ethnic minority communities in Britain. These include the need for further research in the field; improving surveillance and research tools; establishing partnerships with affected communities; improving access to curative services; and delivering culturally competent and targeted interventions.

#### **9.3.1 Methodological research on ethnicity**

The research studies presented in this thesis highlight the importance of ongoing methodological research aimed at improving ethnicity classification in social research. Relatively little is known about how individuals chose to classify their ethnic background and whether this is a static or changeable phenomenon. Similarly, more information is needed to understand how ethnicity changes within individuals and across generations within a multicultural society. This is particularly relevant in Britain, with increasing proportions of British born 'ethnic minorities' and growing 'mixed' and 'other' populations.

#### **9.3.2 Improve surveillance and research tools**

Inequalities in sexual health cannot be tackled unless they are identified. Investment in, and development of, robust STI surveillance systems which are capable of detecting and

monitoring ethnic variations in disease outcomes, should be prioritised. Future studies should continue to question the purpose and utility of collecting ethnicity data, using ethnicity data to understand cultural mores which are relevant to behaviour modification (Harry & Clark 1998), and ensuring that target communities are consulted and engaged in the development of research and surveillance programmes.

### **9.3.3 Identify and understand the cultural context**

Anthropologic investigations using qualitative techniques (e.g. participant observation or focus groups) have made a significant contribution to our understanding of the cultural influences on health. Their application to the sexual health of Black and ethnic minority communities are now urgently required. Research is needed to better understand culturally prescribed practices that influence STI transmission risk, for example, the use of vaginal herbs (Pitts, Magunje, & McMaster 1994; Runganga, Pitts, & McMaster 1992), circumcision (Bongaarts *et al.* 1989; Hunter *et al.* 1994), vaginal douching (Aral, Mosher, & Cates 1992; Rajamanoharan *et al.* 1999), assortative sexual mixing (Barlow, Daker White, & Band 1997; Ghani, Swinton, & Garnett 1997; Hudson 1996; Hudson 1998) and polygamy/concurrence (Hudson 1996; Hudson 1998; Santelli *et al.* 1998). These behaviours may subsequently be targeted for behavioural modification, risk reduction or harm-minimisation.

### **9.3.4 Establish partnerships with affected communities**

Participatory research and interventions remain key strategies for improving the health of marginalised communities (Macaulay *et al.* 1999). Community partnerships may be created at any phase of an intervention but are strengthened when groups are involved from the conceptual phases of its design, implementation, analysis and dissemination. The benefits of community participation include self-empowerment, capacity development, improved social capital, and increased lay involvement (Brown & Tandon 1983; Labonte 1994). It is particularly relevant for improving the sexual health of ethnic minority communities, among whom fear of stigmatisation, and mistrust of research and researchers may be problematic (Del Amo, Goh, & Forster 1996). Few evaluations of participatory research or sexual health interventions within Black and ethnic minorities are currently available.

### **9.3.5 Access to sexual health services**

Ensuring access to sexual health services are key strategies for reducing the burden of STIs (Adler, Foster, Richens, & Slavin 1996). However, communities may still fail to use them, even when accessible, high-quality diagnostic and treatment services are provided. Where communities are particularly hard to reach, or do not routinely access health-care services, community-based screening and treatment for STIs may be useful. Although much work has been done on opportunistic STI screening of women in outreach settings, very little has been done for men (Fenton 2000). Few innovative outreach or rapid-access services for Black and ethnic minority communities have been piloted. Where they exist, only a handful have been formally evaluated.

### **9.3.6 Culturally-competent behavioural interventions**

Behavioural interventions seek to reduce the risk of acquiring or transmitting HIV or other STIs by changing behaviours that lead to transmission of infection (Stephenson 1999). Behavioural interventions to reduce risk for HIV/AIDS can be effective. However, they need to be pragmatic, generalisable, and acceptable to clients and staff. Culturally competent interventions suggest that that interventions are appropriate, relevant and acceptable to the communities being targeted. The lack of evidence regarding behavioural interventions among ethnic minorities in the United Kingdom and Europe is worrisome, and point to areas for future prioritisation. Further behavioural intervention research must focus on emerging risk groups, particularly ethnic minority women and young people.

## **9.4 CONCLUDING STATEMENT**

Ethnic variations in sexual health outcomes represent a failure of public health, and demand urgent prioritisation and intervention. However, they form part of a wider spectrum of health inequalities in western industrialised settings that are driven by discrimination and racism in addition to behavioural, demographic, social and economic factors. The studies presented in this thesis suggest that strategies to improve the sexual health of ethnic minorities should be multi-faceted, ideally combining both medical and social approaches

with comprehensive involvement of affected communities. Above all, new methods for measuring and understanding the impact of discrimination on sexual health outcomes are now required.



# Chapter 10.

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# Race, ethnicity and the epidemiology of sexually transmitted infections

Volume II

Kevin Andrew Fenton

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## APPENDIX 1

### LIST OF OUTPUTS ARISING FROM/ ASSOCIATED WITH THIS WORK

## PAPERS IN PEER REVIEWED JOURNALS

- 1: Del Amo J, Broring G, Hamers FF, Infuso A, Fenton K. Monitoring HIV/AIDS in Europe's migrant communities and ethnic minorities. *AIDS*. 2004 Sep 24;18(14):1867-73.
- 2: Jungmann E, Ison C, Martin IM, Fenton KA. Gonorrhoea in young heterosexuals attending urban STD clinics in Britain: a cross-sectional survey. *Int J STD AIDS*. 2004 Apr;15(4):243-8.
- 3: Sethi G, Lacey CJ, Fenton KA, Williams IG, Fox E, Sabin CA, Shaw A, Kapembwa M. South Asians with HIV in London: is it time to rethink sexual health service delivery to meet the needs of heterosexual ethnic minorities? *Sex Transm Infect*. 2004 Feb;80(1):75-6.
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- 15: Johnson AM, Mercer CH, Erens B, Copas AJ, McManus S, Wellings K, Fenton KA, Korovessis C, Macdowall W, Nanchahal K, Purdon S, Field J. Sexual behaviour in Britain: partnerships, practices, and HIV risk behaviours. *Lancet*. 2001 Dec 1;358(9296):1835-42.

- 16: Fenton KA, Chinouya M, Davidson O, Copas A; MAYISHA research team. HIV transmission risk among sub-Saharan Africans in London travelling to their countries of origin. *AIDS*. 2001 Jul 27;15(11):1442-5.
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2. Del AMO J, ERWIN J, FENTON KA, GRAY K. AIDS & Mobility: Looking to the future. Report commissioned by the European Project AIDS & Mobility. October 2001
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7. CHINOUYA M, FENTON K, DAVIDSON O, MILLER D. Social Mapping of African Communities in Camden and Islington. Report of the MAYISHA Project Team, 1998.

#### **CONFERENCE PRESENTATIONS**

1. Ethnicity, high risk sexual behaviours and sexually transmitted infections among GUM clinic attenders. Fenton KA, Copas A, Obasi A, Johnson AM. Poster presentation at the ISSTD Conference in Seville, 19-22<sup>nd</sup> October, 1997
2. Exploring Ethnicity and sexual health: Studying sexual behaviours and lifestyles. Nazroo J, Fenton KA, Elam G, Ritchie J. Oral presentation at the Society for Social Medicine Conference, 1998

## CONFERENCE PRESENTATIONS

3. Ethnicity, high risk sexual behaviours and sexually transmitted infections among GUM clinic attenders. Fenton KA, Copas A, Obasi A, Johnson AM. Poster presentation at the Medical Society for the Study of Venereal Diseases Spring Meeting, Oxford, 1997
4. "Let me tell you what needs to be done..." Suggestions for improving inner-city sexual health services and health promotion from local ethnic minority communities. Fenton KA, Elam G, Johnson AM, Nazroo J, Ritchie J. Poster presentation at the ISSTD Conference, Denver, 11-14th July, 1999.
5. Don't you understand me? The benefits and limitations of matching ethnicity between researchers and respondents- experience from a study exploring ethnicity and sexual health. Elam G, Fenton K, Nazroo J, Ritchie J. Abstract and Oral presentation at the 5<sup>th</sup> International qualitative health research conference, Newcastle Australia, 7<sup>th</sup>-10 April, 1999
6. Exploring Ethnicity and sexual health: Concepts of ethnicity and acculturation. Nazroo J, Elam G, Fenton KA, Ritchie J. Oral presentation at the Society of Social Medicine Conference, 1999
7. Exploring Ethnicity and sexual health: Cross cultural experiences in learning about sex and its impact on subsequent attitudes and lifestyles Fenton KA, Elam G, Ritchie J, Nazroo J. Poster presentation at the XIIth International Conference on AIDS, Geneva (Abstract 14224)
8. Can community participation and sexual behaviour research be integrated in a meaningful way? - the MAYISHA study. Fenton KA, Chinouya M, Davidson O. Poster presentation at the ISSTD Conference, Denver, 11-14th July, 1999.
9. Is community participation in research feasible? The MAYISHA study. Fenton KA, Chinouya M, Davidson O. Oral presentation at the Tenth Conference on the Social Aspects for AIDS, 26<sup>th</sup> June 1999
10. Assessing the sexual health needs of Black gay and bisexual men. Fenton KA, White B, Weatherburn P, Cadette M. Oral presentation at the Tenth Conference on the Social Aspects for AIDS, 26<sup>th</sup> June 1999
11. Researching culture, ethnicity and sexual health among African communities: Implications for HIV prevention. Fenton KA, Chinouya M, Davidson O. Oral presentation at the 1<sup>st</sup> National African Communities HIV Primary Prevention Conference. 9-10<sup>th</sup> March 2000
12. Sexual risk taking in relation to the psychosocial needs of young black gay and bisexual men. White B, Fenton K, Cadette M. Oral presentation at the Third National CHAPS Conference. 1<sup>st</sup> March 2000.
13. Marginal interests or playing at the edge? Assessing the sexual health needs of Black gay and bisexual men. Cadette M, Fenton KA, White B, Weatherburn P. Oral presentation at the Third National CHAPS Conference. 1<sup>st</sup> March 2000.
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15. HIV and black Caribbeans in the UK. Dougan S, Payne L, Fenton K, Evans B. BHIVA Conference June 2003
16. Love in the Global Village, Migration, ethnicity and sexual health. At the IUSTI-EUROPE 2002 18<sup>th</sup> Congress on Sexually Transmitted infections.. Vienna, Austria. September 2002
17. Measuring sexual behaviour; black and white in sexual health. At the Sexual ill health in the Black and ethnic minority communities: the way forward. The Royal Society of Medicine. October 2002
18. HIV in Migrant Communities in Britain: An evolving epidemic. Invited presentation at the Annual Conference of the British HIV Association (BHIVA) University of



## **CONFERENCE PRESENTATIONS**

Manchester Institute of Science and Technology. 24-26<sup>th</sup> April 2003

19. HIV/AIDS in Britain's Migrant Communities. Presented at the Northern Forum HIV Prevention Conference, Manchester. March 2004
20. HIV Research with African communities in England – How are we doing. Invited presentation at the 3<sup>rd</sup> National African HIV Prevention Conference, London 1-3<sup>rd</sup> March 2004

## APPENDIX 2

### ARTICLES PUBLISHED IN PEER-REVIEWED JOURNALS

# Monitoring HIV/AIDS in Europe's migrant communities and ethnic minorities

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## Introduction

HIV/AIDS continues to be a major public health challenge in twenty-first century Europe [1,2]. Increasing population movement whether for travel, political or economic purposes, combined with demographic, social and economic transitions create conditions that contribute to the increase of HIV transmission worldwide [3–6]. Inequity, social exclusion, along with cultural, socio-economic and language barriers to HIV/AIDS prevention and care, make some of Europe's migrant and ethnic minority populations especially vulnerable to the negative impact of HIV/AIDS [3,7–9]. Understanding the determinants of HIV/AIDS in Europe's migrant populations and ethnic minorities is crucial for developing appropriate preventive and healthcare services, and informing public health policy. Although it is acknowledged that health inequalities, including those by race and/or ethnicity, should be monitored, the manner to do it is more controversial. On one hand, the publication of HIV/AIDS data by race/ethnicity will give greater visibility to these

problems [10–13], but on the other, there is a real danger of inadvertent promotion of xenophobia and further stigmatization of migrants and ethnic minorities.

In this paper we examine the variables used to monitor HIV/AIDS in migrants and ethnic minorities in surveillance systems in Western Europe, discuss their advantages and limitations, highlight some of the data, and draw recommendations to identify ways in which HIV/AIDS surveillance for vulnerable groups may be strengthened.

## Historical background of racial/ethnic variables in routine data in Europe

Over the last four decades, Europe has become an increasingly multi-ethnic society [14]. There is considerable heterogeneity in the populations we refer to when alluding to 'migrants and ethnic minorities'. The term 'migrant population' encompasses diverse demo-

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graphic and social groups. The term Ethnic minorities include both the 'historic ethnic minorities' as well as those resulting from more recent migration waves.

Since the end of the nineteenth century, many Western countries have developed systems to monitor the distribution and occurrence of certain infectious diseases in order to develop rapid preventive responses. Most countries have surveillance systems to monitor the distribution and evolution of diseases, transmissible or otherwise, in different groups of the population. As highlighted before, collection of such data is essential for describing differential patterns of disease distribution and for prospectively monitoring changes in incidence, particularly resulting from the implementation of targeted interventions.

Considerable inequalities exist in the distribution of health outcomes across migrant populations and ethnic minorities in Western countries for both infectious and non-infectious diseases [15–21]. Regarding the variables that measure racial/ethnic diversity, the collection of data on race in routine health service monitoring and disease surveillance activities has been historically done in the USA [22–26]. The collection of such data is considered essential for one of the goals of the USA National Health objectives for 2010, which is 'to eliminate health disparities among racial/ethnic populations' [27].

In contrast, in many European countries, it is socially unacceptable to collect information on race in statistics and in many countries there are laws that restrict the collection of such data; for example, in France, data on race cannot be collected without the individual's consent [28]. The UK collects ethnicity data in the census since 1990/1, and has gradually introduced ethnicity categorization in health statistics since the mid-1990s [29,30]. What is uniform across the EU is the existence of laws that protect individuals from being discriminated because of their race, religion and/or political ideas and obviously, the collection of data for such purposes.

As regards to the variables identifying migration status, tuberculosis and, since 2002, HIV/AIDS are, to our knowledge, the only diseases for which country of origin has been collected in surveillance activities at European level [31].

### **What information is currently collected in Europe to monitor HIV/AIDS in migrants and ethnic minorities?**

A wide range of variables have been used to characterize migrants and ethnic minorities in HIV/AIDS

national surveillance systems of different EU countries (Table 1). These include nationality, country of birth, country of origin, country of residence, country of probable infection, race, ethnic group, date of arrival in the country, refugee status, country of origin of the partner, with most countries collecting more than one variable and some collecting none. This heterogeneity reflects, in part, the diversity in the epidemiological and migratory patterns across countries as well as societal attitudes about classifying individuals according to race, ethnicity and other related characteristics.

The most commonly used variable is 'nationality' which is currently collected by 12 of the 15 surveillance systems from the EU. 'Country or continent of birth' is collected in six countries and 'country of origin' is used in Belgium, Denmark, and Spain. Ethnic group is used only in two countries. In Belgium, ethnic groups (used for AIDS but not for HIV reporting) are defined as 'White/Caucasian', 'Black/African', 'Hispanic/Latino', 'Asian', 'Mixed', 'Unknown' (EuroHIV, unpublished data). In the UK, the classification was changed in 1994 to the categories adopted by the Office of Population Censuses and Surveys (OPCS), which are 'White, Black African, Black-Caribbean, Black-Other, (Indian/Bangladeshi/Pakistani/Asian or Oriental), Other/Mixed, Not Known'. Race is used only in the Portuguese HIV/AIDS surveillance forms together with nationality. Country of probable infection is recorded in Denmark, Finland, Norway, Portugal, Sweden, and UK (in the latter country it is only reported for cases of heterosexual transmission).

In addition to this, several countries collect more specific information on migration (for example: Belgium and UK, date of arrival in the country; Portugal, any long-term residence abroad; Norway, reason for staying abroad; Denmark, immigration/refugee status) (EuroHIV unpublished data). Most of these variables are routinely used in national surveillance reports: for example, the Swedish surveillance centre publishes cases of HIV infection acquired in or outside of Sweden and the continent where infection probably took place; in Belgium, cases are classified as residents versus non-residents.

As well as these variables used for surveillance purposes, the scientific literature on HIV infection in Europe and the United States is full of studies that have also classified populations according to race [32–34], ethnicity [35–37] and country of origin [38–40]. Various long-term studies on HIV characteristics in Europe collect data on ethnicity [36,38,41], country of origin [38,39,42], country of birth, and nationality [43].

Until 2002, EuroHIV, the European Commission funded surveillance network for HIV/AIDS, collected information on geographic origin for cases infected

Table 1. Variables collected in HIV/AIDS surveillance in Western Europe.

Variable	Uses and limitations	Where utilized
Race	Generally refers to the broad physical differences between individuals as determined by key physical features, including skin colour and facial shape. As a biological concept, it is increasingly outdated in the field of medicine and health since its significance has been undermined in the context of current genetic knowledge: races do not have distinct packages of genetic characteristics. A community's shared ancestral and geographical origins as well as cultural traditions, religions and languages. Although currently considered a better term than race, ethnic group is often used as a euphemism for race.	Asked only in the Portuguese HIV/AIDS surveillance forms together with nationality.
Ethnicity		Used only in two countries: Belgium, for AIDS but not for HIV reporting, and the United Kingdom.
Nationality	Different countries use different criteria to grant nationality and this complicates comparisons at an international level and across Europe. Nationality cannot discriminate between the ethnic origins of less recent migrant populations. When it is one with a generalized HIV epidemic, previously referred as Pattern II – has been defined from the very beginning of the epidemic as one of the criteria for classifying cases of HIV/AIDS in the surveillance transmission category 'heterosexual infection' providing no other risk factors were present [25]. Based on the fact that persons originating from countries with generalized epidemics accounted for the majority of HIV/AIDS cases of heterosexual transmission reported in Western Europe. As with nationality, country of birth and/or origin does not distinguish whether the individual is a second-generation immigrant, and neither does it identify ethnic minorities.	The most common variable currently collected by 12 of the 15 surveillance systems from the EU; Sweden no longer records nationality in AIDS surveillance. Collected in six countries. Used in Belgium, Denmark, and Spain. This information is also routinely published at European level ( <a href="http://www.eurohiv.org">www.eurohiv.org</a> ) for cases infected heterosexually.
Country or continent of birth		
Country of origin		
Other variables		
Country of probable infection	Several countries collect more specific information on migration. Most of these variables are routinely used in national surveillance reports.	Recorded in Denmark, Finland, Norway, Portugal, Sweden, and UK (only for cases of heterosexual transmission).
Date of arrival		Belgium and UK.
Any long term residence abroad		Portugal
Immigration/refugee status		Denmark
Residents versus non-residents		Norway
Reason for staying abroad		Belgium
Country with a generalized HIV epidemic		WHO/UNAIDS definition at European level.

heterosexually and by mother-to-child transmission only [2]. Given the heterogeneity and the increasing need to monitor the epidemic in these populations, national representatives for HIV/AIDS surveillance in Europe agreed to collect country of origin for all cases of HIV/AIDS from 2002 [2]. This decision was adopted after the completion of a special survey on HIV/AIDS cases reported during 1997–1999 [44]. As EuroHIV collected information on the geographic origin for cases infected heterosexually and by mother-to-child transmission, the decision to collect information on the country of origin of all transmission categories seemed the most appropriate.

### **Pitfalls and limitations of the variables used to characterize HIV/AIDS in migrants and ethnic minorities in Europe**

The uses and limitations of the variables used to characterize migrants and ethnic minorities in the HIV/AIDS national surveillance systems of the different EU countries are summarized in Table 1. Serious pitfalls have been and are still made when investigating health outcomes by race and/or ethnicity and inadequate scientific approaches have done more harm than good in the past [45,46]. It is now generally accepted that race/ethnicity should not be used as an intrinsic risk to study disease aetiology [47–49]. Racial classifications have no scientific grounds and their significance has been undermined in the context of current genetic knowledge [25,46,50]. What race *does* measure is the level of exposure to racism since race is, indeed, a social construct [25,46,49–52].

The collection of race/ethnicity data in surveillance is not subject to the debate highlighted above because its aim is to monitor trends over a period of time. However, it has other types of problems as disease surveillance requires variables that are easy to define and are sustainable over time, characteristics incompatible with the concepts of migration and ethnicity [53–56]. Furthermore, the borders of these definitions are unclear; in some instances, the concepts of being a migrant and a member of an ethnic minority are mutually exclusive, and in others instances they refer to the same group of people.

Special care has to also be taken in the interpretation of these data since the variables used to classify migrants and ethnic groups are strongly correlated with socio-economic status, although nonetheless, differences in health by ethnic group persist at different levels of socio-economic status [29,57].

Finally, the surveillance systems themselves have limitations that need to be acknowledged. On the one

hand, unbiased population rates are difficult to obtain because appropriate denominators are not readily available as most Western European countries population censuses do not collect ethnicity. AIDS rates in migrant communities are also likely to be overestimated as undocumented migrants, the most deprived and vulnerable, have a higher probability of appearing in the numerator, but are often missing from the population denominators. On the other hand, surveillance systems may be underpowered to interpret results from targeted interventions.

The decision to incorporate country of origin in HIV/AIDS surveillance by EuroHIV, based on practicality and availability, is a step forward in improving HIV surveillance in migrants and ethnic minorities and the data will provide a wider picture of the situation in Europe. However, country of origin has limitations since it does not identify ethnic minorities born in the host country, and may lead to misclassification of populations at risk for HIV, such as the second-generation migrants and the established ethnic minorities. In addition, country of origin may have different interpretations and may not always adequately reflect the migration trajectory.

### **HIV/AIDS among migrant populations and ethnic minorities in Europe – recent trends**

The annual number of AIDS cases in Europe has declined considerably since 1996, largely driven by highly active antiretroviral therapy (HAART) [2]. Between 1995 and 2001, AIDS incidence in Western Europe decreased by 75% among men who have sex with men and 72% among intravenous drug users. Smaller reductions (32%) in AIDS incidence were observed among individuals infected heterosexually [2]. Consequently, the proportion of AIDS cases in Europe attributable to heterosexual transmission rose and by 2001, heterosexual contact accounted for the first time for the largest single transmission group for AIDS (36%).

Data on the country of origin of HIV/AIDS cases reported in 11 of the 17 countries in Western Europe was first published in 2003 [2]; of all AIDS cases reported to end-2002, 13.3% originated from sub-Saharan Africa, 3% from Latin America and the Caribbean and 2.2% from another European country [2]. For new HIV diagnoses, heterosexual contact also became the most common transmission mechanism in Western Europe accounting for 44% of the cases [2]. Similar to AIDS reporting, an increasing proportion of the new HIV reports are taking place in persons from countries with high HIV prevalence; 18.6% from sub-

Saharan Africa, 3.4% from other European countries and 1.5% from Latin America and the Caribbean [2].

The increasing importance of migrants and ethnic minorities diagnosed with AIDS had been identified over the last few years by national surveillance systems [8]. By 2000, 47% of reported AIDS cases in Belgium were non-nationals, the majority from sub-Saharan Africa [58]. In France, 31% of the non-French nationals with AIDS by 1998 were sub-Saharan Africans, 20% North Africans and 12% Haitians [59]. In Spain, by 2000 the commonest areas of origin of non-Spaniards with AIDS were Western Europe (27%), Africa (29%) and Latin America (20%) [60]. In Italy, among AIDS cases diagnosed in non-Italians by 2000, the commonest group originated from Africa followed by those from South America [61]. Of the non-European foreign nationals diagnosed with AIDS in Germany by 1997, 39% were from sub-Saharan African, 26% were North American, 18% Asian and 13% Latin American [8]. In Sweden, of 49% AIDS cases recorded by 2000 as 'having been infected outside the country', the most numerous were 'probably infected in Africa', (25%), 'European countries' (excluding Nordic countries) (8%) and 'America' (6%) [8]. By 2001, 22% of AIDS cases in the UK were found in non-white UK individuals, of whom 'Black Africans' accounted for 65% [62].

In addition to national HIV and AIDS reporting, surveillance activities and research studies have also identified the increasing importance of recent migration in HIV/AIDS epidemiology. In Spain, data from 18 sexually transmitted disease/HIV testing clinics in 2000 showed that HIV prevalence for Spanish subjects was 2.3% for men and 1.0% for women and was significantly different from men and women from Latin America (11 and 0.3% respectively), sub-Saharan Africa (9 and 7.5% respectively), and women from the north of Africa (12%) [39]. Data from the Swiss HIV Cohort Study show a steady increase in the proportion of participants from sub-Saharan Africa from 1984 to 2001, reaching 12% by 1997–2001 [63].

As well as an increasing number of HIV and AIDS diagnoses among migrants in Western Europe, surveillance systems have also been able to identify differences in the access to HIV/AIDS care; the decline in new AIDS cases has been slower among migrants and ethnic minorities [2,8]. In Belgium, by 2000, marked reductions in AIDS were observed among 'residents' (defined as living in Belgium for 5 years or more before AIDS diagnosis) but not among 'non-residents' [58]. Between 1996 and 1998, there was a drop of 61% in AIDS incidence among French nationals and 44% among non-French [59]. Different factors may contribute to the slower decline in AIDS among non-nationals and include late HIV diagnosis, lower uptake of HAART and continued in-migration of individuals

with advanced disease. In France, from 1994 to 1998, 42% of non-French nationals did not know their HIV status until they developed AIDS compared to 22% of French nationals [59]. In Spain, simultaneous diagnosis of HIV infection and AIDS between 1997 and 1999 was higher among non-Spaniards, both from developed and developing countries [64].

Late presentation of migrants and ethnic minorities before and after HAART has been described by various studies. In a multicentre study conducted in London before HAART, HIV-positive Africans presented later than non-Africans, had similar progression rates to AIDS and death in multivariate analyses but were more likely to be prescribed monotherapy (versus double therapy) compared with non-Africans [65]. In the era of HAART, HIV-infected Africans in London continued to present late [66]. The EuroSIDA Study Group showed that AIDS was diagnosed at the same level of immunodeficiency in subjects of European and non-European origin, there were no differences in the level of CD4 count at which treatment was initiated nor were differences in survival detected [38]. Similar results were obtained using ethnic group instead of area of origin. Sub-Saharan African men in the Swiss Cohort Study had lower median CD4 cell count at presentation and almost one-third presented with AIDS. However, no differences in the uptake of triple antiretroviral therapy, progression to AIDS or death were observed when compared with Swiss HIV positive recruits [63].

### **Strengthening EU HIV/AIDS surveillance for migrants and ethnic minorities - where do we want to be?**

The data reviewed suggest common trends in HIV/AIDS among the EU's migrant communities. As regards to ethnic minorities, there is little information other than the UK data. The recommendation to include country of origin in European HIV/AIDS surveillance should help to describe the burden of HIV and to improve prevention among some migrant populations in Europe. However further studies are needed to identify vulnerable groups from ethnic communities whose country of origin is the reporting country, currently invisible to surveillance activities. Although efforts to monitor HIV transmission among vulnerable subgroups in the population should not compromise monitoring HIV transmission in the general population, the characteristics of some of Europe's HIV epidemics still demand specific actions targeting hard-to reach groups.

It is necessary to examine ways in which ethnicity and migration are being defined and monitored across the

EU to reach a consensus on the variables to be collected, especially since collection of these data is very complex in some countries. Some of these issues cannot be addressed through current surveillance systems, although efforts should also be made to measure contextual variables and to explore how being a migrant and/or belonging to an ethnic minority affects health outcomes in different countries with different health and social welfare systems. These efforts should be done in partnership with affected communities in order to develop culturally appropriate mechanisms for collecting, reporting and disseminating surveillance data and prevent adverse or hostile reactions. Definition of the boundaries of what is acceptable by different societies is subject to debate but with the growing interest in research around tackling ethnic variations in health, identification of acceptable and sustainable variables is a challenge to be faced in the following years. In this respect, the involvement of community-based organizations (CBOs) into monitoring HIV/AIDS in Europe can play a vital role. CBOs can provide crucial in-depth information and identify obstacles to surveillance, prevention and care. Community-based activities are also vital to develop solutions in the fields of information, care and research. Cultural mediators, for instance, may be able to bridge communication gaps between researchers and health workers and the communities they wish to address.

Understanding the dynamics of the HIV epidemic in migrants and ethnic minorities in Europe is a difficult task, as is responding to the epidemic appropriately. Many European countries still have relatively limited systems with which to adequately describe the evolution of infectious diseases among migrant communities and ethnic minorities. While efforts have been made to include country of origin in European HIV surveillance, monitoring HIV/AIDS in ethnic minorities has been less successful. Attempts to improve collection of these surveillance data should acknowledge this heterogeneity before adopting an EU-wide concerted action to develop agreed minimum standards across the EU, and evaluate the use and effectiveness of these data. These actions require the collaboration of all EU surveillance centers through the currently established HIV/AIDS surveillance network EuroHIV. The involvement of the affected communities and community-based organizations into the research process will facilitate the achievement of common goals and reduce the negative impact of HIV/AIDS in the affected communities.

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## HIV health experiences among migrant Africans in Europe: how are we doing?

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**Keywords:** HIV, migrant Africans, Europe, health care, ethnicity

Research into health and migration is an area of growing interest, with many continuing to focus on the description of so-called 'imported diseases' or comparing disease burden in migrants from different countries in order to improve understanding of disease aetiology. In Western industrialized settings, these research studies have often considered migrants as 'outsiders', giving rise to concerns about ethnocentrism and racism [1–3]. Over the last few years, new approaches to researching the health of migrant populations and ethnic minorities have been proposed, and more attention is now being paid to the wider determinants of ill-health in these groups, such as social exclusion, racism and social disadvantage [4,5].

Despite these advances, relatively few studies have focused on the health experiences of migrant populations living with HIV in Europe, or on their patterns of access to, and utilization of, HIV treatment and care. In this issue of *AIDS*, Staehelin *et al.* [6] describe the characteristics, access to antiretroviral therapy, disease progression and survival of migrants from Sub-Saharan Africa in the Swiss HIV Cohort Study. They show a steady increase in the proportion of Sub-Saharan Africans entering the study between 1984 and 2001.

This trend is consistent with patterns observed in other Western European countries in the last few years, reflecting patterns of international migration and population movement and the impact of global HIV/AIDS epidemic; it also confirms the evolving nature of the HIV epidemic among migrants in Europe [7–9]. Data from EuroHIV indicate that, where information on geographic origin was available, 12.4% of those with AIDS diagnosed between 1997 and 1999 in Western Europe were foreigners. Of these, the commonest area of origin was Sub-Saharan Africa (5.5%), followed by other western Europeans (2.5%), North Africans (1.6%) and Latin Americans (1.3%) [9].

HIV-positive men from sub-Saharan Africa in the Swiss cohort presented with more advanced HIV infection, though this was not observed in sub-Saharan women. The nature of disease in women may reflect the implementation of antenatal HIV screening, but other factors, including differential migratory patterns and patterns of health-care access and utilization, may also operate. Late presentation of migrants and ethnic minorities have been reported in hospital-based studies in the UK [10,11] and population-based AIDS Registers in Europe [7] before and after the widespread

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availability of highly active antiretroviral therapy (HAART). Even in the Western European context of universal health care, migrants and ethnic minorities often face strong barriers to accessing HIV/AIDS prevention and care services, many of which lie outside the health-care setting and require community-based interventions [12]. Studying the inequalities in access to health-care services, therefore, requires information provided by the community to complement that obtained from hospital-based cohorts. In a recent report from the *Seventh European Migrants Meeting: Access to HIV Care and Support for Migrants and Ethnic Minorities in Europe*, the European network AIDS&Mobility concluded that treatment of HIV/AIDS should acknowledge the precarious social and administrative circumstances of these communities and also that many friends and relatives at home have no access to antiretroviral medications [13].

Nevertheless, despite these barriers, it is reassuring to note that, once migrants eventually reach effective HIV treatment and care services in Europe, there are no differences in the uptake of HAART, in progression to AIDS or in survival. This main conclusion of the Swiss HIV Cohort Study has also been reported by other hospital-based studies in Europe [10,14]. HIV-positive Africans in London presented later than non-Africans and had similar progression rates to AIDS and death [10] and the EuroSIDA Study Group found that AIDS was diagnosed at the same level of immunodeficiency for subjects of European and non-European origin, with no differences in the level of CD4 cell count at which treatment was initiated, or in survival [14]. Similar results were obtained repeating analyses using the variable ethnic group instead of area of origin [14].

Staehelin *et al.* [6] raise concerns about the lack of ethnicity data in the Swiss Cohort, which may have lead to misclassification. This underscores the importance of understanding and clarifying the terminology used [15]. At present, substantial heterogeneity exists across Europe in the definition of 'migrants' and time at which migrants become, or may be considered to be, ethnic minorities. Nevertheless, no matter how unscientific these classifications may be, they provide a rough tool to capture and measure the reality of racism and discrimination within our societies [16,17]. In the United States, where racial/ethnicity data have historically been collected, there is clear evidence of racial/ethnic disparities in the use of antiretroviral drugs and prophylaxis for opportunistic infections [18–20]. Monitoring racial/ethnic discrimination requires variables that help to classify populations, and how best to do so is an area of intense debate [1,7,15–17,21,22]. This is particularly an issue in Europe, where data on race/ethnicity have not been collected historically. Parallel efforts should also be made to measure contextual variables, conduct multilevel analyses and to explore

how belonging to an ethnic minority affects health outcomes in the presence of different macroeconomic and social determinants. Since the integration of migrants in health services is a reflection of their integration in society, the variables 'migrant' or 'ethnic group' may have different prognostic value in different settings.

So what are the implications for HIV prevention and control among migrants in Europe? HAART is making inequality in HIV care more visible even in countries with free and universal access to antiretroviral drugs [20,23,24]. Health-care interventions alone cannot be expected to eradicate the racial/ethnic differences in access to health and health outcomes. Continued efforts are required to improve understanding of the health experiences of migrants and ways in which prevention policies may be best tailored to suit diverse and often conflicting needs. The data confirm that more concerted approaches need to be adopted for ensuring the health and well-being of migrant populations. Strengthening liaisons between HIV clinical care settings, surveillance networks, researchers and communities is the best way to achieve common goals.

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## ORIGINAL ARTICLE

## Black Caribbean adults with HIV in England, Wales, and Northern Ireland: an emerging epidemic?

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**Background:** HIV is now well established in the Caribbean, with prevalence in several countries being surpassed only by those of sub-Saharan Africa. Continuing inward migration from the Caribbean and a high incidence of some bacterial STIs among Britain's black Caribbean communities, suggests a considerable potential for HIV spread.

**Methods:** Data from three national HIV/AIDS surveillance systems were reviewed, providing information on new HIV diagnoses, numbers accessing treatment and care services, and HIV prevalence.

**Results:** Between 1997 and 2001, 528 black Caribbean adults were newly diagnosed with HIV; 62 new diagnoses in 1997, rising to 176 in 2001. Probable heterosexual acquisition accounted for 335 (63%) infections (161 (48%) males, 174 females), and sex between men 171 (32%). Infection was acquired both in the Caribbean and in the United Kingdom. Numbers of black Caribbeans accessing treatment and care services more than doubled between 1997 (294) and 2001 (691). In 2001, 528 (76%) black Caribbeans accessing services were London residents. Among the Caribbean born previously undiagnosed heterosexuals, HIV prevalence was 0.7%; among men who have sex with men (MSM) it was 10.4%. Of those born in the Caribbean, 73% of male heterosexuals, 50% of female heterosexuals, and 65% of MSM who were previously undiagnosed left the clinic unaware of their HIV infection.

**Conclusions:** Numbers of black Caribbean adults newly diagnosed and accessing treatment and care services in England, Wales, and Northern Ireland increased between 1997 and 2001. Despite a high prevalence of diagnosed bacterial STIs, prevalence among Caribbean born heterosexuals remains low, but it is high among MSM. Surveillance data highlight the need for targeted HIV prevention among black Caribbeans.

In 2001 there were an estimated 564 000 black Caribbeans living in England, Wales, and Northern Ireland, representing 1% of the total population and 12% of the ethnic minority population.<sup>1</sup> Despite forming a long established part of our society, black Caribbeans still face social and economic disadvantage,<sup>2–3</sup> considerable health inequalities,<sup>4</sup> and racial discrimination.<sup>5</sup>

The HIV epidemic is well established within the Caribbean, with several countries having adult HIV prevalences surpassed only by those of sub-Saharan Africa.<sup>6</sup> UNAIDS estimated that there were over 420 000 people living with HIV/AIDS in 2001 in the Caribbean, 2.3% of the population.<sup>7</sup> Inward migration from the Caribbean to England, Wales, and Northern Ireland continues,<sup>8</sup> as well as frequent travel of the United Kingdom's black Caribbeans between the two regions.<sup>9</sup>

A high incidence of diagnosed bacterial STIs has been described among black Caribbean communities in England, Wales, and Northern Ireland.<sup>10–13</sup> In one study, compared with white counterparts, gonorrhoea rates were 12–13 times higher among black Caribbean males and females, and chlamydia rates were eight times higher in black Caribbean females.<sup>11</sup> Differential patterns of service utilisation<sup>14</sup> and sexual mixing<sup>15</sup> may also contribute to the observed concentration of bacterial STIs within black Caribbean communities. Behavioural studies suggest earlier sexual intercourse among black Caribbeans compared to white people in Britain.<sup>16–17</sup>

In this paper we review the epidemiological data describing HIV/AIDS in black Caribbean adults in England, Wales, and Northern Ireland, in order to describe the evolution of the HIV epidemic in this ethnic group in the United Kingdom,

and to examine the inter-relations between epidemics in the Caribbean and the United Kingdom.

## METHODS

We reviewed three surveillance systems, held at the Communicable Disease Surveillance Centre (CDSC), that together provide an informative picture of HIV/AIDS among black Caribbean adults ( $\geq 15$  years) in England, Wales, and Northern Ireland between 1997 and 2001 inclusive. Ethnicity is generally self assigned, and not always directly collected; country of birth is used as a surrogate marker in some surveillance systems.

## New HIV diagnoses

Voluntary confidential reports of new HIV diagnoses are received from virologists and clinicians, the latter also reporting new AIDS diagnoses.<sup>18</sup> Ethnicity data are collected on laboratory and AIDS reports, and ethnic categorisations (based on the Office for National Statistics categories) have not changed since 1993. Clinician reporting of new HIV diagnoses was introduced in 2000, collecting information on country of birth, and date of arrival in the United Kingdom, as well as ethnicity. Data on probable route of infection are collected on all reports, through follow up when the information reported is initially incomplete. Probable country of infection is collected on all reports, and for heterosexuals, is followed up.

Misallocation of black Caribbean ethnicity probably occurs at all stages of data handling, typically resulting in reports mistakenly coded black African, and vice versa. Records were "cleaned" before analysis, using country of probable infection, country of birth, and follow up information to identify

**Table 1** Numbers and proportions of new diagnoses and HIV infected adults accessing treatment and care services by year and ethnic group in England, Wales, and Northern Ireland: 1997–2001

Year of diagnosis/seen for treatment or care												
Ethnic group	1997	%	1998	%	1999	%	2000	%	2001	%	Total	%
New diagnoses												
Black Caribbean	62	2.5	71	2.8	98	3.5	121	3.4	176	3.7	528	3.3
Black other	21	0.8	20	0.8	35	1.2	35	1.0	37	0.8	148	0.9
White	980	39.5	1032	40.4	1039	36.6	1375	38.5	1593	33.7	6019	37.2
Black African	488	19.7	631	24.7	851	30.0	1353	37.9	2055	43.5	5378	33.3
Other/mixed	58	2.3	84	3.3	86	3.0	114	3.2	139	2.9	481	3.0
I/P/B*	36	1.5	38	1.5	38	1.3	70	2.0	57	1.2	239	1.5
Not known	837	33.7	680	26.6	689	24.3	502	14.1	669	14.2	3377	20.9
Total	2482	100.0	2556	100.0	2836	100.0	3570	100.0	4726	100.0	16170	100.0
Accessing treatment and care services												
Black Caribbean	294	2.0	358	2.2	436	2.3	517	2.5	691	2.8		
Black other	229	1.6	250	1.5	259	1.4	316	1.5	385	1.6		
White	9205	62.4	10860	66.2	12034	64.8	12884	61.7	14048	57.7		
Black African	2037	13.8	2654	16.2	3526	19.0	4465	21.4	6319	26.0		
Other/mixed	509	3.4	997	6.1	1018	5.5	919	4.4	1079	4.4		
I/P/B*	153	1.0	203	1.2	266	1.4	293	1.4	291	1.2		
Not known	2328	15.8	1089	6.6	1021	5.5	1472	7.1	1528	6.3		
Total	14755	100.0	16411	100.0	18560	100.0	20866	100.0	24341	100.0		

(New diagnoses reported by end of June 2003, HIV infected individuals accessing treatment and care services from annual SOPHID surveys).

\*I/P/B = Indian/Pakistani/Bangladeshi.

"true" black Caribbeans. In total, 34 relevant errors in ethnicity coding were corrected; 26 records of black Caribbeans were reassessed as records of black Africans and four as white or ethnicity not reported, and four black Africans reassessed as black Caribbean.

**Accessing services for HIV related treatment and care**  
The Survey of Prevalent HIV Infections Diagnosed (SOPHID) gives a measure of the number of individuals living with diagnosed HIV infection in England, Wales, and Northern Ireland.<sup>19</sup> This annual survey aims to collect information for each individual seen for HIV related treatment and care within the previous calendar year, including the level of antiretroviral therapy and CD4 count when last seen for care, and area of residence. Ethnicity data have been collected since the survey began in 1995.

### Undiagnosed HIV

The Unlinked Anonymous Prevalence Monitoring Programme (UAPMP) measures the level of undiagnosed (that is, unrecognised) infection in different population subgroups.<sup>20</sup> Most of the surveys test for HIV in blood samples left over after completion of routine clinical tests. All specimens have patient identifying details permanently removed before testing. The UAPMP genitourinary medicine (GUM) survey uses residual blood taken for syphilis serology, and provides information on HIV prevalence among men who have sex with men (MSM) and heterosexuals attending 15 GUM clinics (seven in London, eight elsewhere in England, Wales, and Northern Ireland), as well as information on the uptake of testing and co-infection with other STIs. Ethnicity data are not collected, but country of birth is, and this is used as a surrogate for ethnicity. A UK GUM clinic is synonymous with an STD clinic in other countries.

The unlinked anonymous survey of neonatal dried blood spots provides information on HIV prevalence among pregnant women by area of residence, using the blood taken from newborn infants for routine metabolic screening to test for maternal antibodies to HIV. Electronic linkage to birth registration records in three participating regions allows the collection of additional demographic data, including mother's country of birth. Data linkage was established in 1997 for the

North Thames Region, and 2000 for the South East Thames and the North West regions. A small number of mothers born in central America are included with those born in the Caribbean.

### Statistical methods

Descriptive epidemiology has been supplemented by statistical tests where appropriate.  $\chi^2$  Tests for trend were calculated using Epi-Info 6 (v.6.04d), and median age in years including the interquartile range (IQR) in Stata 8.

### Ethics

Reports of new diagnoses and of those diagnosed and living with HIV are voluntary and confidential. To maintain patient confidentiality no names are held on the database, and surname Soundex codes are used instead.<sup>21</sup> The reporting system has approval under the section 60 regulations of the Health and Social Care Act (Statutory Instrument 1438–June 2002). The ethical and legal basis for unlinked anonymous testing has been described elsewhere<sup>22</sup> and the programme complies with recent guidelines published by the Medical Research Council.<sup>23</sup> All data are stored on restricted and secure databases at CDSC, with strict adherence to the Data Protection Act and Caldicott guidelines.<sup>24</sup>

## RESULTS

### New diagnoses

Between 1997 and 2001, 528 black Caribbean adults were newly diagnosed with HIV, representing 3.3% of all reported infections in adults over the same period. A 2.8-fold increase in the numbers of newly diagnosed black Caribbeans occurred between 1997 and 2001, the largest proportional increase within an ethnic group after black Africans (table 1). In 1997 there were 62 new HIV diagnoses in black Caribbeans (2.5% of the total reported), in 2001 there were 176 new HIV diagnoses (3.7% of the total reported).

Sex between men and women was the predominant (63%) probable route of infection among black Caribbeans (table 2), compared to 50% (8089/16 170) overall. The proportion of heterosexually acquired new diagnoses among black Caribbeans increased by 18% between 1997 and 2001, an equivalent rise occurring for all ethnicities (38% (945/2482) to 58% (2750/4726)) over the same period. The proportion of



**Table 2** Numbers and proportions of black Caribbean adults newly diagnosed, and HIV infected and accessing treatment and care services, by year and probable route of infection, in England, Wales, and Northern Ireland: 1997–2001

Probable route of infection	Year of diagnosis/seen for treatment or care										Total	%
	1997	%	1998	%	1999	%	2000	%	2001	%		
<b>New diagnoses</b>												
Sex between men	27	43.5	27	38.0	30	30.6	36	29.8	51	29.0	171	32.4
Heterosexual, male	17	27.4	26	36.6	31	31.6	37	30.6	50	28.4	161	30.5
Heterosexual, female	13	21.0	16	22.5	34	34.7	44	36.4	67	38.1	174	33.0
Other/undetermined	5	8.1	2	2.8	3	3.1	4	3.3	8	4.5	22	4.2
<b>Total</b>	<b>62</b>	<b>100.0</b>	<b>71</b>	<b>100.0</b>	<b>98</b>	<b>100.0</b>	<b>121</b>	<b>100.0</b>	<b>176</b>	<b>100.0</b>	<b>528</b>	<b>100.0</b>
<b>Accessing treatment and care services</b>												
Sex between men	140	47.0	170	46.4	168	37.3	202	38.0	256	36.3		
Heterosexual, male	63	21.1	69	18.9	88	19.6	105	19.7	165	23.4		
Heterosexual, female	54	18.1	71	19.4	114	25.3	136	25.6	207	29.4		
Other/undetermined	41	13.8	56	15.3	80	17.8	89	16.7	77	10.9		
<b>Total</b>	<b>298</b>	<b>100.0</b>	<b>366</b>	<b>100.0</b>	<b>450</b>	<b>100.0</b>	<b>532</b>	<b>100.0</b>	<b>705</b>	<b>100.0</b>		

[New diagnoses reported by end of June 2003, HIV infected individuals accessing treatment and care services from annual SOPHID surveys].

black Caribbeans newly diagnosed, who had probably acquired their infection through sex between men, significantly decreased from 44% in 1997 to 29% in 2001 compared to heterosexuals ( $\chi^2 = 5.56$ ,  $p = 0.02$ ), and overall accounted for 32% of newly diagnosed infections within this ethnic group.

#### Sex between men and women

Of the 335 black Caribbeans with heterosexually acquired HIV diagnosed between 1997 and 2001, 161 (48%) were male and 174 female. Median age at diagnosis was 35.1 (IQR: 30.1–43.9) and 32.8 (IQR: 26.6–39.9) years respectively. Where probable country of infection was reported, 97 (63%) black Caribbean male heterosexuals were probably infected in the Caribbean, including 58 in Jamaica and 37 (24%) in the United Kingdom (table 3). Of those with a known country of birth, 44 (75%) were born in the Caribbean and 14 (24%) in the United Kingdom. By comparison, 71 (44%) black Caribbean heterosexually infected women were probably infected in the Caribbean, including 51 in Jamaica, and 66 (41%) in the United Kingdom (table 3). Of those with a known country of birth, 47 (62%) were born in the Caribbean and 24 (32%) in the United Kingdom.

#### Men who have sex with men

The median age at HIV diagnosis of the 171 black Caribbean men probably infected through sex between men was 32.3 years (IQR: 27.4–38.0). Where probable country of infection was reported, 48 (62%) black Caribbean MSM were probably infected in the United Kingdom, 27 (35%) in the Caribbean, including 17 in Jamaica (table 3). Of those MSM for whom country of birth was known, 35 (53%) were born in the Caribbean and 27 (41%) in the United Kingdom.

#### HIV infected individuals accessing treatment and care

A 2.4-fold increase was observed in the numbers of diagnosed black Caribbeans accessing treatment and care services in England, Wales, and Northern Ireland between 1997 and 2001, equivalent to the increase seen in new diagnoses. In 1997, 294 (2.0%) of the 14 755 adults seen for HIV related treatment and care services were black Caribbeans, rising to 691 (2.8%) of 24 341 in 2001 (table 1). This was the greatest increase observed within an ethnic group, other than the black Africans, over the 4 year period.

From 1999 more black Caribbeans seen for treatment and care had acquired HIV heterosexually rather than through sex between men (table 2). In 2001, 372 (53%) black

**Table 3** Region/country of birth and region/country of probable infection of the black Caribbean adults newly diagnosed with HIV between 1997 and 2001 in England, Wales, and Northern Ireland, by probable route of infection. (Reports by the end of June 2003)

Region/country of birth		Region/country of probable infection					Total
		Caribbean	UK	Other	Subtotal	Not known	
Heterosexual males	Caribbean	36	3	3	42	2	44
	UK	3	10	–	13	1	14
	Other	1	–	–	1	–	1
	Subtotal	40	13	3	56	3	59
	Not known	57	24	16	97	5	102
Total		97	37	19	153	8	161
Heterosexual females	Caribbean	27	18	2	47	–	47
	UK	4	17	1	22	2	24
	Other	–	–	5	5	–	5
	Subtotal	31	35	8	74	2	76
	Not known	40	31	16	87	11	98
Total		71	66	24	161	13	174
Men who have sex with men	Caribbean	14	10	–	24	11	35
	UK	–	13	–	13	14	27
	Other	–	1	–	1	3	4
	Subtotal	14	24	0	38	28	66
	Not known	13	24	2	39	66	105
Total		27	48	2	77	94	171

Caribbeans patients accessing care had heterosexual acquisition of infection reported, and 256 (36%) through sex between men ( $\chi^2 = 21.26$ ,  $p < 0.01$ ), representing proportional increases of 84% and 52% respectively since 1999.

### Uptake of treatment

In the 2001 SOPHID survey, CD4 count and information on the level of antiretroviral therapy at last clinic attendance was reported for 496 (72%) black Caribbeans compared to 78% (18 960/24 350) in all adults. Seventy three (75%) of 97 black Caribbeans with a CD4 cell count  $< 200$  cells  $\times 10^6/l$  were receiving triple therapy or more, compared to 78% of black Africans (1022/1309) and of white people (1244/1599) ( $\chi^2 = 0.42$ ,  $p = 0.81$ ). Uptake of treatment at last clinic attendance was equivalent among heterosexuals and MSM, and between black Caribbeans, black Africans, and white people (data not shown).

### Area of residence

In 2001, 528 (76%) black Caribbeans diagnosed and living with HIV were London residents. South east London (boroughs of Lambeth, Lewisham, and Southwark) had the largest resident numbers (185). Outside London, the West Midlands (40) and the south east (31) had the highest numbers of resident black Caribbeans living with diagnosed HIV. Rates per 1000 black Caribbean population were highest in London (1.54 per 1000), south west, and south east (1.14 per 1000), with the West Midlands having a rate of 0.49 per 1000 population (fig 1).

### Undiagnosed HIV and uptake of testing

Between 1997 and 2001, prevalence among Caribbean born male heterosexuals attending GUM clinics with previously undiagnosed HIV was 0.7% (37/5682) ( $\chi^2 = 0.06$ ,  $p = 0.81$ ), and for Caribbean born female heterosexuals, 0.6% (26/4604) ( $\chi^2 = 4.71$ ,  $p = 0.03$ ) (table 4). By comparison, prevalence among UK born male and female heterosexuals was 0.16% (180/112125) and 0.12% (142/120497) respectively, and for those born in sub-Saharan Africa, 2.9% (229/7832) and 4.7% (376/7920) respectively. Prevalence among Caribbean born MSM previously undiagnosed at time of clinic visit was 10.4% (20/192) ( $\chi^2 = 0.29$ ,  $p = 0.59$ ). The equivalent prevalence for UK born MSM was 3.8% (793/20 906).

Between 1997 and 2001, of previously undiagnosed HIV infected Caribbean born heterosexuals, 73% of males and 50% of females left the clinic undiagnosed (table 4), compared to 61% (110/180) and 61% (87/142) of previously

undiagnosed HIV infected UK born male and female heterosexuals and 47% (107/229) and 46% (173/376) of previously undiagnosed HIV infected sub-Saharan Africa born male and female heterosexuals. For Caribbean born MSM the proportion was 65%, compared to 60% (477/793) for UK born MSM.

Acceptance of voluntary confidential testing (VCT) for HIV increased in Caribbean born heterosexuals from 15% (296/1921) in 1997 to 40% (1032/2594) in 2001 ( $\chi^2 = 333$ ,  $p < 0.00001$ ) and in Caribbean born MSM from 28% (11/40) in 1997 to 41% (19/46) in 2001 ( $\chi^2 = 0.91$ ,  $p = 0.34$ ). Similarly, acceptance of VCT for HIV increased in UK born and sub-Saharan Africa born heterosexuals (24% (11 991/50 669) and 28% (929/3272) in 1997 to 35% (16 977/48 329) and 47% (1810/3837) in 2001 respectively), and UK born MSM (44% (1988/4485) in 1997 to 55% (2434/4451) in 2001).

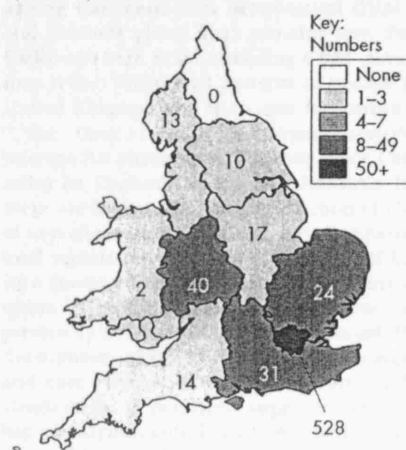
Between 1997 and 2001, 41% (28/69) of Caribbean born HIV infected heterosexuals and 42% (16/38) of Caribbean born MSM were co-infected with an acute STI at the time of UA HIV testing. By comparison, 29% (121/417) of UK born HIV infected heterosexuals, 21% (182/854) of sub-Saharan Africa born HIV infected heterosexuals and 36% (558/1535) of UK born HIV infected MSM were co-infected with an acute STI at the time of testing.

### HIV prevalence among Caribbean born women giving birth

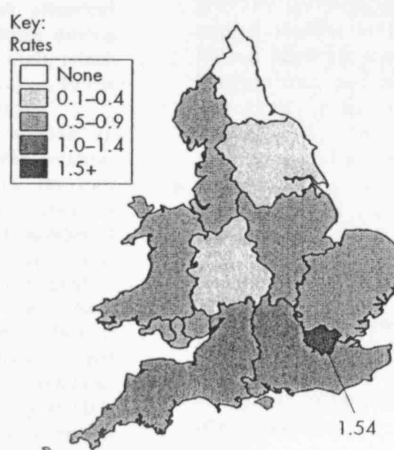
HIV-1 prevalence among women born in central America/Caribbean and giving birth in the North Thames Region between 1997 and 2001 was 0.31% (13/4189), with no significant trend over the years. Ten (77%) of the HIV infected women were born in Jamaica, giving a prevalence of 0.44% (10/2254) among Jamaican born women giving birth between 1997 and 2001 in this region. HIV-1 prevalence among women born in the United Kingdom and giving birth in the North Thames Region between 1997 and 2001 was 0.03% (96/298 485), and for women born in sub-Saharan Africa, 1.51% (606/40 184).

For 2000 and 2001, HIV prevalence among central American/Caribbean born mothers was 0.27% (3/1125) in the South East Thames Region, and 0.0% (0/125) in the North West Region. For comparison, HIV prevalence among UK born women giving birth was 0.02% (15/67 372) in the South East Thames Region, and 0.01% (8/67 125) in the North West Region over the same period. Equivalent figures for mothers born in sub-Saharan Africa were 2.04% (122/5982) and 1.01% (11/1084) respectively.

Number of individuals reported  
(n = 679)



Rate per 1000 resident population  
Black Caribbeans



**Figure 1** Region of residence of HIV infected black Caribbean adults accessing treatment and care services in England and Wales in 2001 (data from annual SOPHID survey, 2001, population estimates from the Office for National Statistics, Census 2001).

**Table 4** Total HIV prevalence and proportion remaining undiagnosed among Caribbean born GUM attendees by probable route of transmission and year of survey (1997–2001) (UAPMP, GUM Survey)

Year	Total tested in UAPMP GUM survey			HIV undiagnosed before clinic visit			
	Number of samples tested	Number HIV-1 positive	HIV-1 prevalence (%)	Number HIV-1 positive	HIV-1 prevalence (%)	New diagnosis at that visit	Proportion of positives remaining undiagnosed after clinic visit (%)
	(a)	(b)	(b/a)	c	(c/[a - (b - c)]) <sup>5</sup>	(d)	((c - d)/c)
Heterosexual males							
1997	1095	5	0.5	5	0.5	0	100
1998	1128	11	1.0	8	0.7	1	88
1999	1051	9	0.9	9	0.9	4	56
2000	1079	9	0.8	9	0.8	3	67
2001	1333	7	0.5	6	0.5	2	67
<b>Total</b>	<b>5686</b>	<b>41</b>	<b>0.7</b>	<b>37</b>	<b>0.7</b>	<b>10</b>	<b>73</b>
Heterosexual females							
1997	826	0	0.0	0	0.0	0	–
1998	769	3	0.4	3	0.4	1	67
1999	820	7	0.9	7	0.9	2	71
2000	930	7	0.8	7	0.8	4	43
2001	1261	11	0.9	9	0.7	6	33
<b>Total</b>	<b>4606</b>	<b>28</b>	<b>0.6</b>	<b>26</b>	<b>0.6</b>	<b>13</b>	<b>50</b>
Men who have sex with men							
1997	40	5	12.5	2	5.4	0	100
1998	40	8	20.0	7	17.9	2	71
1999	42	5	11.9	3	7.5	3	0
2000	42	5	11.9	1	2.6	0	100
2001	46	15	32.6	7	18.4	2	71
<b>Total</b>	<b>210</b>	<b>38</b>	<b>18.1</b>	<b>20</b>	<b>10.4</b>	<b>7</b>	<b>65</b>

## DISCUSSION

Our data confirm that numbers of new diagnoses among black Caribbeans and the number of black Caribbeans HIV infected and accessing treatment and care services in England, Wales, and Northern Ireland, have increased rapidly in recent years. Both heterosexual and homosexual sex have contributed to the spread of HIV within this community, with injecting drug use not having a significant role. The increasing importance of heterosexually acquired HIV is reflected in the rising numbers of black Caribbean women newly diagnosed and the numbers accessing treatment and care services. Reasons for this increasing heterosexual contribution may include rising HIV prevalence in the Caribbean,<sup>6</sup> the maturing of the HIV epidemic among black Caribbeans in England, Wales, and Northern Ireland leading to symptomatic individuals presenting with infection, and increased awareness about HIV among black Caribbeans at a local services level. The close inter-relation between HIV in the Caribbean and in England, Wales, and Northern Ireland has been clearly demonstrated. black Caribbeans newly diagnosed with HIV in England, Wales, and Northern Ireland are a mixture of UK and Caribbean born, acquiring HIV in either setting. Nevertheless, the prevalence of HIV among Caribbean born heterosexual GUM clinic attendees and mothers giving birth remains low. Prevalence among Caribbean born MSM attending GUM clinics is high, which may reflect differential patterns of inward migration to the United Kingdom, and is an area for further research.

The three surveillance systems reviewed provide an informative picture of HIV among black Caribbean communities in England, Wales, and Northern Ireland. However there are limitations. The introduction of clinician reporting of new diagnoses in 2000 will have increased the number of total reports received, and the number of black Caribbeans, with increased reports of black Caribbeans and the identification of individuals as black Caribbean who would have previously not had their ethnicity reported. However, data on the numbers of HIV infected individuals accessing treatment and care services show that HIV among black Caribbean communities is increasing, suggesting that reporting artefact has not significantly biased observations in new diagnoses among black Caribbeans. Heterosexual spread of HIV among

Caribbeans within England, Wales, and Northern Ireland is also likely to be underestimated, as if exposure to HIV has occurred in more than one country, the country with highest prevalence will be assigned as the likely country of infection.

Information from new diagnoses shows that where country of birth was known a third of black Caribbeans were UK born. Such individuals will have been excluded from GUM and neonatal dried blood spot analyses (country of birth is collected not ethnicity), but may have similar risk behaviours as those born in the Caribbean, may maintain close links to the Caribbean, and be younger than those migrating. As country of birth has only been collected for new diagnoses since 2000, it is not possible to determine whether there has been a proportional increase of UK born black Caribbeans being newly diagnosed with HIV compared to Caribbean born. Prevalence estimates from the unlinked anonymous surveys may be biased, as only 15 GUM clinics

## KEY MESSAGES

- The numbers of black Caribbeans newly diagnosed with HIV and numbers diagnosed and accessing HIV related services in England, Wales, and Northern Ireland have increased rapidly in recent years. Sex between men and heterosexual sex have both been important in the spread of HIV among black Caribbeans, with infections acquired in the Caribbean and in the United Kingdom.
- HIV prevalence among Caribbean born heterosexuals attending GUM clinics is relatively low, as is HIV prevalence among Caribbean born pregnant women, while HIV prevalence among Caribbean born MSM is high.
- Increases in HIV diagnoses and HIV prevalence are less than expected when considering the much higher rates of some bacterial STIs found among black Caribbeans in England, Wales, and Northern Ireland, compared to other ethnicities.

are involved in the GUM survey and three regions within the neonatal dried blood spot survey have data linkage. However, of the 15 GUM clinics, seven are in London.

The epidemiology of HIV among black Caribbeans in England, Wales, and Northern Ireland has not been previously described. Concurrent infection with an STI facilitates HIV transmission, including non-ulcerative STIs such as gonorrhoea and chlamydia<sup>25</sup>; however, the epidemiological impact of interactions is difficult to estimate.<sup>26</sup> The high prevalence of bacterial STIs within black Caribbean communities contrasts with the relatively low levels of HIV that exists among black Caribbean heterosexuals. These differences may be explained by sexual mixing patterns or, again, differential migration—areas for future research.

Issues that have not been addressed here include the role of travel back to Caribbean "home countries" in the acquisition of HIV among black Caribbean residents of England, Wales, and Northern Ireland and the characteristics of those self assigned as "black other," typically including "British born black." Numbers of new diagnoses among those of black other ethnicity remain low (table 1) and it is difficult to determine from routine reporting whether individuals are of Caribbean ancestry. Among British born second and third generation ethnic minorities a process of acculturation has been described during which there is a progressive shift of prescribed "cultural norms" of the ethnic minority group towards those of the ethnic majority.<sup>27</sup> This may result in differing HIV epidemiology, and health promotion and service requirements between those of black other ethnicity and black Caribbeans.

The national strategy for sexual health and HIV aims to reduce inequalities in sexual health, recognising that services must respond to the different needs of different populations.<sup>28</sup> As HIV spreads among the black Caribbean communities in England, Wales, and Northern Ireland, the emerging surveillance evidence must be used to ensure that prevention and services are targeted towards those who need them most, and that widespread transmission of HIV among this ethnic group is averted.

## CONTRIBUTORS

SD, LP, KF, and BE conceived the idea for the paper; SD, LP, AB, IL analysed the new diagnoses, SOPHID, UAPMP GUM, and UAPMP DBS surveys respectively, with support from BE and OG; all authors were involved in interpretation of the results and drafting of the paper; SD undertook the main writing of the paper.

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## HIV health experiences among migrant Africans in Europe: how are we doing?

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Research into health and migration is an area of growing interest, with many continuing to focus on the description of so-called 'imported diseases' or comparing disease burden in migrants from different countries in order to improve understanding of disease aetiology. In Western industrialized settings, these research studies have often considered migrants as 'outsiders', giving rise to concerns about ethnocentrism and racism [1–3]. Over the last few years, new approaches to researching the health of migrant populations and ethnic minorities have been proposed, and more attention is now being paid to the wider determinants of ill-health in these groups, such as social exclusion, racism and social disadvantage [4,5].

Despite these advances, relatively few studies have focused on the health experiences of migrant populations living with HIV in Europe, or on their patterns of access to, and utilization of, HIV treatment and care. In this issue of *AIDS*, Staehelin *et al.* [6] describe the characteristics, access to antiretroviral therapy, disease progression and survival of migrants from Sub-Saharan Africa in the Swiss HIV Cohort Study. They show a steady increase in the proportion of Sub-Saharan Africans entering the study between 1984 and 2001.

This trend is consistent with patterns observed in other Western European countries in the last few years, reflecting patterns of international migration and population movement and the impact of global HIV/AIDS epidemic; it also confirms the evolving nature of the HIV epidemic among migrants in Europe [7–9]. Data from EuroHIV indicate that, where information on geographic origin was available, 12.4% of those with AIDS diagnosed between 1997 and 1999 in Western Europe were foreigners. Of these, the commonest area of origin was Sub-Saharan Africa (5.5%), followed by other western Europeans (2.5%), North Africans (1.6%) and Latin Americans (1.3%) [9].

HIV-positive men from sub-Saharan Africa in the Swiss cohort presented with more advanced HIV infection, though this was not observed in sub-Saharan women. The nature of disease in women may reflect the implementation of antenatal HIV screening, but other factors, including differential migratory patterns and patterns of health-care access and utilization, may also operate. Late presentation of migrants and ethnic minorities have been reported in hospital-based studies in the UK [10,11] and population-based AIDS Registers in Europe [7] before and after the widespread

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**See also p. 2237**

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availability of highly active antiretroviral therapy (HAART). Even in the Western European context of universal health care, migrants and ethnic minorities often face strong barriers to accessing HIV/AIDS prevention and care services, many of which lie outside the health-care setting and require community-based interventions [12]. Studying the inequalities in access to health-care services, therefore, requires information provided by the community to complement that obtained from hospital-based cohorts. In a recent report from the *Seventh European Migrants Meeting: Access to HIV Care and Support for Migrants and Ethnic Minorities in Europe*, the European network AIDS&Mobility concluded that treatment of HIV/AIDS should acknowledge the precarious social and administrative circumstances of these communities and also that many friends and relatives at home have no access to antiretroviral medications [13].

Nevertheless, despite these barriers, it is reassuring to note that, once migrants eventually reach effective HIV treatment and care services in Europe, there are no differences in the uptake of HAART, in progression to AIDS or in survival. This main conclusion of the Swiss HIV Cohort Study has also been reported by other hospital-based studies in Europe [10,14]. HIV-positive Africans in London presented later than non-Africans and had similar progression rates to AIDS and death [10] and the EuroSIDA Study Group found that AIDS was diagnosed at the same level of immunodeficiency for subjects of European and non-European origin, with no differences in the level of CD4 cell count at which treatment was initiated, or in survival [14]. Similar results were obtained repeating analyses using the variable ethnic group instead of area of origin [14].

Staehelin *et al.* [6] raise concerns about the lack of ethnicity data in the Swiss Cohort, which may have lead to misclassification. This underscores the importance of understanding and clarifying the terminology used [15]. At present, substantial heterogeneity exists across Europe in the definition of 'migrants' and time at which migrants become, or may be considered to be, ethnic minorities. Nevertheless, no matter how unscientific these classifications may be, they provide a rough tool to capture and measure the reality of racism and discrimination within our societies [16,17]. In the United States, where racial/ethnicity data have historically been collected, there is clear evidence of racial/ethnic disparities in the use of antiretroviral drugs and prophylaxis for opportunistic infections [18–20]. Monitoring racial/ethnic discrimination requires variables that help to classify populations, and how best to do so is an area of intense debate [1,7,15–17,21,22]. This is particularly an issue in Europe, where data on race/ethnicity have not been collected historically. Parallel efforts should also be made to measure contextual variables, conduct multilevel analyses and to explore

how belonging to an ethnic minority affects health outcomes in the presence of different macroeconomic and social determinants. Since the integration of migrants in health services is a reflection of their integration in society, the variables 'migrant' or 'ethnic group' may have different prognostic value in different settings.

So what are the implications for HIV prevention and control among migrants in Europe? HAART is making inequality in HIV care more visible even in countries with free and universal access to antiretroviral drugs [20,23,24]. Health-care interventions alone cannot be expected to eradicate the racial/ethnic differences in access to health and health outcomes. Continued efforts are required to improve understanding of the health experiences of migrants and ways in which prevention policies may be best tailored to suit diverse and often conflicting needs. The data confirm that more concerted approaches need to be adopted for ensuring the health and well-being of migrant populations. Strengthening liaisons between HIV clinical care settings, surveillance networks, researchers and communities is the best way to achieve common goals.

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## Researching Sensitive Issues and Ethnicity: Lessons from Sexual Health

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### ABSTRACT

*Researchers are generally familiar with the need to adapt their research methods in order to minimise the impact of sensitivity. However, are different considerations required for studies of ethnicity or with ethnic minority respondents? This paper provides insight into strategies used by the authors to tackle sensitivity in qualitative and quantitative research studies of sexual health and ethnicity. Drawing on examples from these studies, the paper demonstrates the relevance of Lee's model of sensitivity, and examines ways in which ethnicity may add further dimensions to our ability to understand, identify and limit sensitivity in the research process. The paper identifies techniques available to researchers for handling sensitivity in general, as well as those that may be useful for researching sensitive topics among ethnic minority populations. The paper concludes that, given the transitional and contextual nature of ethnicity and sensitivity, formulaic approaches for tackling the latter are inappropriate. Instead, strategies are best developed in collaboration with the study communities.*

**Keywords:** sensitivity, research methods, qualitative, quantitative, race, culture

### INTRODUCTION

Good research methodology can meet the challenges of most topic areas and study populations. However, some topics, and the contexts in which they are studied, require the development or use of methodologies that are particularly receptive to sensitivity in research. The presence of sensitivity in a study has implications for all aspects of its design, recruitment and interviewing of participants, and the reliability and validity of the study's findings (Catania *et al.* 1990; James *et al.* 1991; Dunne *et al.* 1997; Fenton *et al.* 2001b).

In this paper we draw upon our experiences of conducting research into sexual attitudes and lifestyles among black and ethnic minority groups (Chinouya *et al.* 1999, 2001; Elam *et al.* 1999; Elam 2003a, b; Johnson *et al.* 2001) to demonstrate how qualitative and quantitative methodologies may be adapted and strengthened in order to study sensitive topics. This article will describe the ways in which sensitivity arises in

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the conduct of sexual health research, demonstrate the strategies developed to handle sensitive research situations, and provide general recommendations for overcoming sensitivity in studies of health and ethnicity.

### WHAT IS A SENSITIVE TOPIC?

Certain topics are typically assumed to be 'sensitive' in research terms. Studies of general and sexual health are commonly cited or are the subject of articles on conducting sensitive research (Ingham *et al.* 1999) and members of minority ethnic groups have identified sexual health as a sensitive topic for research (Elam *et al.* 2001a). Topic-based definitions of sensitivity obscure its contextual nature and we can never be certain that a topic or question is not going to trigger an emotional response from a respondent. In fact, the list of sensitive topics cited in research literature is long and, depending on the context, all topics are potentially sensitive (Lee 1993). Such a broad definition of sensitivity often makes it difficult to identify precisely where sensitivity might arise, or to develop strategies to mitigate any detrimental impacts on the researched, the researcher or the study findings.

The model of sensitivity developed by Lee (Lee 1993) provides a means of identifying potential sensitivity. The model is grounded in the premise that it is not individual topics that are sensitive, but their context and environment. Lee and colleagues describe sensitivity in terms of the presence of 'a substantial threat, the emergence of which renders problematic for the researcher and/or the researched the collection, holding, and/or dissemination of research data' (Lee and Renzetti 1993: 5). Such threats in research are emergent and situational, and change relative to the circumstances of the study and the experiences of participants and researchers. Consequently, approaches to sensitivity need to be assessed for each study (Lee and Renzetti 1993) and sensitive methods adapted and shaped to suit the particular requirements of the research programme.

Lee's model facilitates the assessment process by presenting a typology of the three ways in which topics might be threatening: intrusion, sanction, and power. The model provides an opportunity to assess the conditions in which sensitivity occurs, what sort of 'threat' the study may pose and how this might vary under different research conditions. The outcome of such an assessment can inform the development of strategies to ensure that respondents feel it is safe to take part in the study and make fulsome disclosures, and to ensure respondent confidentiality is protected and respondents are not harmed as a consequence of participation in the study. The types of threat identified by Lee are discussed here in the context of our experiences of conducting research among minority ethnic groups.

### Sensitivity Arising from Intrusion into Intimate Behaviour

Research may be regarded as 'intrusive' when it concerns topics that respondents dislike discussing or find difficult to talk about (e.g. topics that evoke emotional feelings or are regarded as 'private') or concern personal or sacred experiences (Dunne *et al.* 1997; Saunders and Reinisch 1999). An individual's sexual behaviour is particularly private and the challenge facing those researching sexual behaviour is how to encourage accurate and reliable reporting of behaviours (Spencer *et al.* 1988; Ingham *et al.* 1999; Fenton *et al.* 2001b).

Even if respondents are willing to discuss 'private topics', experiences of discussion may be rare. Consequently, respondents and interviewers can be unfamiliar with the vocabulary required to facilitate discussion, or having never vocalised words or concepts out aloud, can feel unconfident about doing so for the first time. In a community-based qualitative study of sexual attitudes and lifestyles among British Asian, Caribbean and

African communities (Elam *et al.* 1999), willingness to take part in the study, openness during the interview and feeling relaxed and confident varied between the study populations. Feedback from interviewers revealed that some respondents found the interviews difficult because they were either unfamiliar with the vocabulary required to discuss sexual lifestyles, or did not recognise the concept of a sexual lifestyle in their culture.

### **Sensitivity Arising from Perceived Discreditable or Deviant Behaviour**

Topics in this category include behaviour or circumstances that respondents fear disapproval of; or they themselves regret; or fear repercussions following revelation, for example following revelations of infectious diseases or even symptoms associated with infectious diseases (Elam *et al.* 2001a). Respondents may feel they are not living up to social norms or may expect adverse judgements if they reveal their views or behaviour. Such feelings can be felt individually, or by groups that feel they have been stigmatised. These concerns can arise in response to worries about judgements being made during the interview or can affect participation if there are worries about the impact of the study results on the community.

Fear of disapproval is not associated with 'deviant' behaviour alone. Respondents can worry about discussing universal experiences that are regarded as private. Rare public discourse about topics such as sexual behaviour or norms presents limited opportunities for comparison and can raise concerns among respondents that their experiences or views are abnormal. Such worries are exacerbated if the respondent is living in an unfamiliar cultural environment or if dominant ethnic groups regard the respondent's culture with hostility or disapproval.

Other circumstances that can give rise to unwillingness to discuss health matters include reluctance to cause worry to immediate family members or those in the home country who might be receiving economic support from the respondent. Poor health then becomes a topic that is not discussed at home or with other members of the respondent's social network (Elam *et al.* 2001b).

In studying sexual behaviour, much of what is seen as discreditable or deviant behaviour is culturally (and therefore ethnically) derived (Catania *et al.* 1990; Wadsworth *et al.* 1996). Whereas homosexual sexual behaviour may be less of a challenge to those living in Western industrialised settings (Wellings *et al.* 1994), social taboos within ethnic minority groups may result in strongly expressed negative views about homosexual sexual behaviour (Elam *et al.* 1999). Similar threats are observed in accepted patterns of male and female heterosexual behaviour. The net effect would therefore be a desire to over- or under-report socially accepted or sanctioned behaviours, respectively.

### **Sensitivity Arising from Power Imbalance**

Finally, threats may arise when there is an imbalance of power between the study population and the researcher or the wider population. Research may threaten the interests and power of elites, governments or other powerful organisations. In research terms, the problem that such a threat poses is that powerful or elite groups may not want to share information that could undermine their position or status. Much of our research on sensitive issues and ethnicity has generally involved vulnerable or less powerful groups in society (Chinouya *et al.* 1999; Elam *et al.* 1999, 2001b; Elam 2003a, b). Groups that feel vulnerable or powerless may feel threatened, have little influence over the research process, or lack control over the impact of the results on their community. The latter may be exacerbated by researchers' desire to extrapolate results of unrepre-



sentative studies or convenience samples, for example those taken in STD clinics or non-probability sample studies, that may not be representative of the wider community.

Participants in a study among African communities on attitudes towards HIV revealed that they were concerned about the focus in the media on Africans and HIV (Elam 2003a). Participants felt that the community was being blamed for HIV. Anger about being stigmatised made it difficult for some to express their feelings about HIV. Studies that include recent migrants (Chinouya *et al.* 1999, 2001; Bitel and Kafeero 2000) might include people who have left a conflict situation because of their beliefs or ethnicity, and still feel physically and politically vulnerable. Community reactions to taking part in surveys that included invasive physical measures such as the collection of blood samples, were informed by concerns about the revelation of ailments that respondents felt powerless to treat or by a perception that people were being treated disrespectfully or like 'public property' (Elam *et al.* 2001b).

#### DOES ETHNICITY ADD A FURTHER DIMENSION TO SENSITIVITY?

As a term, 'ethnicity' tends to be regarded as a group that people belong to because of shared characteristics including ancestral and geographical origins, cultural traditions and languages (Bhopal 1997). Wallman (1996) argues that ethnicity is perhaps better understood as the sense of difference that can occur when members of a particular cultural, tribal or national group interact with non-members. Thus a person cannot be ethnic by themselves, or even among others from the same background. It is precisely this sense of difference that may add to or detract from the investigation of sensitive issues across ethnic groups. Grouping people by ethnicity can be problematic because terms used to label or describe ethnic groups can be used inconsistently, overlook sub-group differences, or lead to racialisation of research findings at the expense of class, lifestyle or socio-economic status (Wyatt 1991; Senior and Bhopal 1994).

The collection of ethnicity-related data in quantitative and qualitative research remains controversial in many societies (Bhopal and Donaldson 1998). Although generally considered appropriate in the USA, with its long history of racial monitoring, the use of race or ethnicity as variables in health and social research has only recently gained acceptance in Britain (Del *et al.* 2001). The inclusion of direct questions about ethnicity in the British census was politically sensitive, and initial attempts to do so in the 1981 census were abandoned following public and political resistance during pre-tests. Social researchers were also divided on this issue (Bulmer 1986). In many European countries, although classification by nationality is generally accepted in disease surveillance, few countries identify or use ethnic group as a classificatory variable (Del *et al.* 2001). In this context, sensitivity is not determined solely by individuals' ethnically or culturally defined values and beliefs, but also by more contextual determinants including the societal norms and values regarding the appropriateness and acceptability of classifying individuals based on their physical characteristics (race) or shared beliefs (culture).

Individual factors, for example the socio-economic and political position of the ethnic group in relation to the wider population, and the respondent's age, gender, migration status and acculturation may also mediate the relationship between ethnicity and the investigation of sensitive issues resulting in a contextual and fluid feature of research (Bhopal 1997). For example, when people of African origin living in the UK were asked about their attitudes towards taking part in health studies (Elam *et al.* 2001a), one of the barriers to full participation was the immigration status of the participant. There was a worry that disclosure of poor health might imply that the respondent was unable to be self-sufficient and jeopardise applications to remain in the UK. The presence of such concerns will be informed by the immigration status of the individual, immigration policy and the attitude of the host community towards migrant populations.

Perceptions of sensitivity vary within as well as between different minority ethnic

populations. In the 1990 British National Survey of Sexual Attitudes and Lifestyles (Wellings *et al.* 1994), 18,876 adults aged 16–59 years were surveyed with interviews consisting of a face-to-face section combined with a self-completion booklet. Interviewers recorded their assessment of interviewee embarrassment based on observations made during interviews. Logistic regression was performed, with embarrassment and booklet refusal as outcome variables, assessing their association with sexual behaviour after controlling for demographic variables. Investigators found higher refusal and embarrassment rates to be associated with both reporting no homosexual experience and fewer heterosexual partners (Copas *et al.* 1997). The investigators found a strong association between booklet refusal and embarrassment with ethnicity. In the Mayisha cross-sectional community-based survey (Chinouya *et al.* 2001; Fenton *et al.* 2002), considerable heterogeneity in item non-response rates was observed to questions related to lifetime reported partnerships, recent partner acquisition and sexual contact overseas, by gender and nationality.

#### REDUCING SENSITIVITY IN RESEARCH: GENERAL CONSIDERATIONS

Techniques for handling sensitivity in general population research studies are well established and documented in the research literature (Lee and Renzetti 1993; Ingham *et al.* 1999; Bowling 2000; Ritchie and Lewis 2003). For example, qualitative research is often described as being well suited to both sensitive and complex studies (Black 1994; Power 2002) and many qualitative techniques designed to yield depth (e.g. probing) can also aid the investigation of sensitive issues (Bowling 2000). However, Lee (1993) points out that these techniques are not a panacea for sensitivity, and the qualitative interviewer will still need to think about the 'shape' of the interview, the location and approaches to asking sensitive questions.

Table 1 summarises some of the main techniques and principles available to researchers, which may be used irrespective of the ethnic or cultural context (Lee 1993; Bowling 2000; Ritchie and Lewis 2003).

Briefly, these strategies include the following:

- (1) *Provide clear explanations about the study and use appropriate consent procedures.* This helps to ensure that the respondent has time to prepare and decide if they are willing to discuss potentially distressing or difficult topics. It is also helpful for the interviewer, who can feel more confident in the discussion of sensitive topics knowing that the respondent has willingly volunteered to participate in the interview.

**TABLE 1.** *Strategies for tackling sensitive issues and ethnicity*

General strategies	Specific considerations
<ul style="list-style-type: none"> <li>• Provide clear explanations about the study</li> <li>• Take care in the structure and timing of the interview</li> <li>• Ensure confidentiality procedures are in place</li> <li>• Use qualitative interviewing techniques</li> <li>• Be aware of the environment and time allocated for the interview</li> <li>• Ensure support for respondent post-interview</li> <li>• Support interviewers during and following fieldwork</li> </ul>	<ul style="list-style-type: none"> <li>• Adopt ethical approaches for undertaking research among ethnic minority communities</li> <li>• Utilise participatory research approaches               <ul style="list-style-type: none"> <li>• Demonstrate value of study</li> <li>• Build trust and confidence</li> </ul> </li> <li>• Utilise multiple recruitment strategies</li> <li>• Use of ethnically matched interviewers</li> <li>• Train and prepare interviewers</li> <li>• Plan the reporting and dissemination of research findings</li> </ul>

- (2) *The structure and timing of topic coverage during the interview.* In many quantitative and qualitative studies of sexual behaviour (Chinouya *et al.* 1999; Johnson *et al.* 2001), the interview builds up to more sensitive topics by starting with less threatening topics, such as the respondent's social and demographic background and sex education experiences. Respondents valued the opportunity to discuss their own demographic, social or educational experiences and were more relaxed when more sensitive behavioural topics were raised (Elam *et al.* 1999). This 'warm-up' stage also permits rapport to be developed between researcher and interviewer.
- (3) *Confidentiality procedures.* Despite the apparent willingness of respondents to participate in research, there is a background unease and lack of knowledge about what happens to research as well as mistrust of larger organisations (Hedges 1996). This is apparent in studies of ethnicity when the study groups include marginalised people who do not have access to state- or public-sector organisations, or when experiences of dealing with such organisations have been negative. Demonstrations of confidentiality help reduce threats to power and fear of discovery. Confidentiality procedures and the affiliation of the researcher need to be stated during recruitment, at the beginning and end of the interview and sometimes during the interview at the onset of discussion of particularly sensitive topics.
- (4) *Qualitative interviewing techniques.* The contribution of qualitative methods to the investigation of sensitive phenomena is well established (Black 1994; Power 2002). Many qualitative data-collection techniques designed to yield depth can also aid the investigation of sensitive issues—for example the use of interactive probing questions to elicit detailed explanations and unpack statements is unique to qualitative research. These questioning strategies are well documented and can be practised during training to prepare the interviewer (Bowling 2000; Ritchie and Lewis 2003).
- (5) *Time allocated for the interview.* The long interview tends to be associated with qualitative rather than quantitative study. However, during interviewer-administered surveys, additional time could be allocated and budgeted for to permit the field interviewer to create an appropriate atmosphere before the interview begins and to ensure that the respondent is comfortable with the topics discussed at the end of the interview.
- (6) *Support for the interviewers during and following fieldwork.* Support for interviewers is particularly important if the topic matter is emotional or traumatic. Interviewers need support and feedback from the research team, especially as they are unable to discuss their work in order to maintain respondent confidentiality.
- (7) *Demonstrate the value of the study.* Participants will be more willing to take part in a study and overcome concerns about discussing a private or emotional topic if they believe what they say will have a positive impact (Elam *et al.* 2001b). Evidence from recent studies shows that members of black and minority ethnic populations are willing to participate in research, but community groups are increasingly voicing concerns about the lack of feedback or change emerging as a result of research (Elam and Chinouya 2000). A collaborative approach can help to ensure commitment to publication and action in response to the study findings (Fenton 2001).
- (8) *Build trust and confidence.* Building confidence in the study is key to creating the conditions for respondents to feel safe when talking about private or emotional topics. The respondents need to trust that their feelings will be respected. This process occurs at the preparation, recruitment and interviewing stage. Respondents need to feel convinced that information provided will not be subject to scrutiny by official bodies that might jeopardise social security, housing or immigration. This is particularly relevant if respondents have experienced hostility from official bodies in their home country or during migration (Elam *et al.* 2001b). The respondent needs to be convinced that the interviewer will not judge the person and has the respondent's interests at heart.

In a community-based qualitative study of ethnicity and sexual health (Elam *et al.* 1999), respondents were given the opportunity to state whether they preferred an interviewer of the same sex or similar ethnic background. Offering such choices helped prepare respondents for the interview and allay any worries they might have had about the interviewer's attitudes towards them. Highly skilled recruiters were also instrumental in promoting the interviewers to potential recruits and providing reassurances regarding the professionalism and manner of the interviewers. The recruiters were able to do this because they met all of the interviewers and worked closely with them throughout the study.

### RESEARCHING SENSITIVE TOPICS AMONG ETHNIC MINORITIES: SPECIAL CONSIDERATIONS

Given the transitional and contextual nature of sensitivity and ethnicity, formulaic approaches to handling sensitivity and ethnicity in research studies are not appropriate. In this section we examine some specific issues that may be relevant in undertaking sensitive research with ethnic communities.

#### Research Ethics

Researchers have a moral and professional responsibility to avoid harm to study participants in any study, whatever the topic under investigation (SRA 2002). Ryan (1997) argues that research ethics are at the core of methodological choices and that researchers should be encouraged to be proactive in the development of sensitive and ethical research methodologies. Such moves need to be framed in a way that avoids over-burdening minority community representatives and organisations, many of which are run by volunteers or have limited resources (Elam and Chinouya 2000). Ryan describes work with the Australian Aboriginal community to ensure that research in Aboriginal health is relevant and beneficial to the community and not ethnocentric. The workshop recommended the following procedures to promote ethical research (Ryan 1997):

- (1) researchers should seek the approval of the participating communities and individuals by consulting and negotiating with them, the terms, scope and benefits of the proposed project;
- (2) the issue of ownership and publication of data should be clearly discussed;
- (3) the gender implications, both in respect of focus and benefits, of the research should be explicitly addressed;
- (4) researchers should, on the advice of the local communities involved, employ members of the community to assist the research investigation;
- (5) the assessment process (of research proposals) should begin in the community, and resources should be provided for the community for this process.

#### Adopt a Collaborative Approach with Target Communities

The sensitivity of a research study needs to be assessed in the context in which it is being conducted, before the project begins and in collaboration with representatives of the study population. Collaboration is key to the process of 'respect, shared decision making and effective communication' in research (Sieber 1992: 129) and collaborative approaches are recommended to ensure that (National Aboriginal Health Strategy 1989; Lee and Renzetti 1993; Ryan 1997; Ndfor-Tah 2000):

- communities can advise on appropriate and inappropriate research;
- sensitivity and ethnicity are understood from the population's perspective;

- the study population is familiar with the research process;
- approaches to sensitive and ethical research are informed by the values of the study population, not just the researchers' professional community;
- strategies to handle sensitivity and ethics are developed that are relevant to the current circumstances of the study and the study population; and
- strategies are subject to review and negotiation throughout the study.

There are benefits of community participation for both the study community and the researchers. For the community these benefits include self-empowerment, capacity development, improved social capital, and increased lay involvement (Fenton 2001). Researchers gain from community-specific assets such as specialist language and translation skills, knowledge of community networks and expertise in marketing ideas to the community, raising awareness and seeking participation (Ndfor-Tah *et al.* 2000; Elam 2003b). Community partnerships may be created at any phase of an intervention but are strengthened when groups are involved from the conceptual phases of its design, implementation, analysis and dissemination.

In the Mayisha study (Chinouya *et al.* 1999), collaborative research partnerships were established with African community-based organisations (CBOs) in inner London to undertake much-needed research on sexual attitudes and lifestyles among high-risk African communities. Ten volunteers from local African CBOs were nominated to join the project's research team. All took part in a research training programme before participating in the development of study questionnaires, undertaking community-based recruitment in social and commercial venues, and producing the study reports and output. Post-study evaluation revealed high acceptance and ownership by CBO volunteers, high awareness and acceptance of the research among the affected communities, and improved social capital through community empowerment (Bitel and Kafeero 2000).

### Utilise Multiple Recruitment Strategies

Multiple strategies are important when the population might wish to remain hidden from authorities or when traditional sampling procedures are not appropriate (Bloch 1999). In one study, in-depth interviews with community groups helped to identify appropriate recruitment strategies prior to undertaking interviews with the study population (Elam and Chinouya 2000). In this and other studies, community recruiters were instrumental in adapting recruitment procedures to the study population (Chinouya *et al.* 1999; Elam *et al.* 1999). For example, a study involving respondents from the Indian, Bangladeshi, Ugandan, Nigerian and Jamaican populations in London (Elam *et al.* 1999) required different recruitment strategies with greater use of ethnically matched recruiters among the Bangladeshi and African respondents. Among the Bangladeshi respondents, there was greater discomfort and confusion regarding the sexual health topics covered in the interviews when non-Sylehti-speaking recruiters were involved. Among recruits of African origin, distrust and concern about stigmatisation were lessened when recruiters of African origin approached potential respondents.

### Use of Ethnically Matched Interviewers

A central feature of collaborative approaches to research is the involvement of interviewers that share the ethnic background of the study population. Matching is based on the premise that the quality of the data will be improved because matched researchers have a greater potential to understand and empathise with respondents' circumstances, cultures and experiences than non-matched interviewers. Matching has become regarded as an acceptable strategy in combating some dimensions of sensitivity. Our experience

concurs with others regarding the potential benefits (Rai 1995): the ethnically matched interviewer may find it easier to create an environment for discussion of sensitive issues through shared language and cultural references; their cultural knowledge of how and why sensitivity may arise may be immediately applied to the interview and help to overcome any respondent reservation; and they may also use more appropriate language to explore concepts that do not translate well or the respondent is unfamiliar with (and lacks sufficient language to discuss).

From the respondent's perspective, there may be increased trust and belief that the interviewer will be less judgemental, facilitating disclosure of sensitive topics. There may also be expectations that the interviewer will have the study population's interests at heart and that they are more likely to understand cultural values and norms. These benefits were found in our work. Others have found that gender and experiential similarities are not sufficient in attempts to interview some black and minority ethnic groups (Edwards 1993).

The main disadvantage of ethnic matching is that it places too great an emphasis on the role of discordant ethnic backgrounds in creating sensitive research situations and can lead to other factors being overlooked, for example gender, social status or internal stratification or conflict. During the Mayisha study, a field force was assembled that included representation from a range of ethnic sub-groups, age and gender (Chinouya *et al.* 1999). The presence of an ethnically matched interviewer can make it difficult for respondents to criticise cultural norms or can give rise to reluctance to admit to deviance from accepted behaviour or values. Respondents may tend to under-report experiences or beliefs that they assume the interviewer shares or are regarded as a common feature of the community. For example, during a study of ethnicity and sexual health (Elam *et al.* 1999) a Muslim interviewer found that Muslim respondents tended to provide limited explanations during the interviews. Instead, respondents would reply with comments such as 'as you know', or 'as you have experienced too', or 'as we know from the Qur'an'. In this situation the interviewer had to work very hard to draw out explanations by rephrasing and repeating questions and probes (Elam 1999).

Respondents have noted that an ethnically matched interviewer can seem over-familiar, for example feeling 'like it's my dad interviewing me', which is a drawback in studies where the respondent requires a sense of anonymity in order to participate. Other misgivings include concerns about confidentiality arising from expectations that an ethnically matched interviewer will know people familiar with the respondent, or who socialise in the same venues as the respondent, or will have connections with the respondent's place of origins or family in their home country. Among respondents of mixed parentage who regarded themselves as British or European rather than African, ethnically matched interviewers were regarded as inappropriate and implied that the respondent was being labelled on the basis of colour rather than other dimensions (Elam *et al.* 1999). Disadvantages have been noted by others, for example the impact of social desirability on responses or worries about revelations of previous social status (Rai 1995).

There can be disadvantages from the interviewers' point of view. If ethnically matched interviewers are involved in a study, they are often expected to perform a greater role than unmatched interviewers. Matched interviewers are expected to draw upon a wider range of skills, switch between the very different activities of recruitment and interviewing, and play additional roles as key informants, translators and gatekeepers to the community identifying and negotiating access (Bloch 1999). It should also be borne in mind that matched interviewers are not immune from some of the difficulties experienced by their community, for example with housing, immigration, and family responsibilities in the home country (Bitel and Kafeero 2000).

There are however, some strategies that can mitigate such disadvantages. These include (Elam *et al.* 1999):

- selection and training of ethnically matched interviewers to ensure professionalism and adherence to the study's confidentiality procedures;
- discouraging interviewers from conducting fieldwork in neighbourhoods they live or work in;
- offering respondents a choice of interviewer, for example matched or non-matched ethnic group or matched gender or not; and
- ensuring that respondents receive explanations regarding study confidentiality procedures and that interviewers are trained to demonstrate such procedures clearly and openly to respondents.

Our experience has been that concerns regarding sensitivity are stronger at the recruitment stage and that once these are overcome then the skill and professionalism of the interviewer is the factor that has the greatest impact on how well sensitivity is handled during the interview (Elam *et al.* 1999; Ingham *et al.* 1999).

### **Train and Prepare Recruiters and Interviewers**

In order for respondents to feel confident about discussing a topic, they need to feel that the interviewer is non-judgemental and relaxed about the topic matter. If the interviewer appears embarrassed in any way, then the respondent will too. Interviewer effects arising from the interviewer's expectations of sensitivity need to be identified and addressed prior to commencement of fieldwork; often the interviewer is more worried about sensitivity in an interview than the respondent (Lee 1993). Community researchers are subject to the same sensitivities that are present in the community population, and may feel reluctant about probing sensitive topics if they feel protective of the community, or unconfident if they are worried about possible reactions of respondents.

A key part of preparing a study is training the recruiters and interviewers. Training for many of our qualitative and quantitative studies involved 1 or 2 days of intense training followed by paired interviewing with an experienced interviewer and, during qualitative studies, continuous feedback on tapes and transcripts of interviews throughout fieldwork.

Table 2 outlines some key areas covered in interviewer training programmes for previous studies of sexual behaviour (Chinouya *et al.* 1999, 2001; Elam *et al.* 1999).

### **Manage the Reporting and Dissemination of Research Findings**

Lee and colleagues (Lee and Renzetti 1993) have presented approaches for dissemination of sensitive research findings. They suggest that: (1) the role of the media in the presentation and interpretation of research findings needs to be proactively anticipated at the design stage rather than left to the end of the research process; (2) researchers need to be trained to handle dealings with the media authoritatively; and (3) the nature of potential harm should be assessed rather than assumed, and this process should be in collaboration with representatives of the study population. In addition, researchers must be aware of the potential impact of their work on racial prejudice when reporting incidence of, for example, infections, and that it is not always possible to control media reports (McKenzie and Crowcroft 1994; Bhopal 1997; Fenton *et al.* 1997; Ross 1998).

We have consistently used the participatory approach for the dissemination of research findings. In the Mayisha study, representatives from the target African communities joined researchers to agree a dissemination strategy. Individual country reports with country-specific data were provided only to each individual country group to inform the development of targeted interventions. In contrast, unless with prior agreement, all public presentations and peer-reviewed publications presented anonymised country of origin, or used a composite 'born in Africa' as the main explanatory variables (Chinouya *et*

**TABLE 2.** *Strategies for training interviewers to undertake studies of sensitive issues and ethnicity*

Training	Study benefits
Familiarisation with study population with briefings and meetings with community representatives.	<ul style="list-style-type: none"> <li>• Identifies any prejudices or expectations present among interviewers and recruiters. This is particularly relevant to avoid use of racial stereotypes by recruiters to identify eligible respondents and to boost the confidence of interviewers hesitant about raising culturally sensitive topics during the interview.</li> <li>• Creates commitment to the research project and team and understanding of the purpose of the data and how it will be analysed.</li> </ul>
Briefing on confidentiality procedures.	<ul style="list-style-type: none"> <li>• Ensures that recruiters and interviewers can confidently address any concerns about the study.</li> </ul>
Questionnaire and topic guide briefing and practice in asking questions and interviewer–respondent role playing.	<ul style="list-style-type: none"> <li>• Enables interviewers to develop awareness of own norms and limitations through role playing.</li> <li>• Identifies techniques for handling sensitive topic areas.</li> <li>• Provides opportunity for community interviewers to share culturally appropriate questioning techniques.</li> <li>• Participants learn to vocalise taboo words.</li> <li>• Provides techniques for obtaining private interviews when other people are present.</li> </ul>
Discuss any worries about the interviews and how to handle them during the interview. It is important to remind interviewers that the respondent has consented to the interview.	<ul style="list-style-type: none"> <li>• Interviewers are sometimes surprised how willing respondents are to discuss sensitive topics; sometimes the sensitivity is more of an issue for the interviewer.</li> </ul>
Follow-up training with paired interviews and feedback on pilot fieldwork.	<ul style="list-style-type: none"> <li>• Involves interviewers in developing strategies for handling sensitivity in interviews that has not been anticipated, and sharing of appropriate interviewing techniques.</li> </ul>

*al.* 1999; Bitai and Kafeero 2000; Fenton *et al.* 2001a, 2002). In so doing, the research team attempted to limit stigmatisation of specific communities, whilst meeting their needs for relevant and accurate behavioural data. Such strategies are also informed by the need to ensure that the level of detail reported does not jeopardise respondent confidentiality or compromise data-protection requirements. However, there is a tension in such reporting strategies between the need to limit stigmatisation and protect confidentiality, but not conceal the heterogeneity of coalesced population groupings (Elam and Chinouya 2000).

## CONCLUSIONS

Managing sensitivity in research is a prerequisite for undertaking ethical studies and obtaining valid and reliable results. Given its complex nature, quick fixes for tackling sensitive issues are often inappropriate. In contrast, effective handling of sensitive research topics requires a considered approach in which the potential sources of sensitivity are understood and identified, and their potential impact on all phases of the research study—from design, to implementation and reporting—are considered and planned for proactively in collaboration with the study community. Undertaking research among ethnic minority communities will present some additional special considerations, of which community engagement and participation are key interventions. Our experience



in sexual health research suggests that lessons for tackling sensitive issues and ethnicity are likely to apply to the study of other sensitive topics.

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# Strategies for improving sexual health in ethnic minorities

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In many developed countries, ethnic minority communities bear the brunt of poor sexual health outcomes, with high rates of HIV/AIDS, sexually transmitted infections and their sequelae. Economic disadvantage, social exclusion and racism experienced by these communities all contribute to the observed inequalities. However, culturally prescribed attitudes and behaviours also play an important role. A review of the literature suggests that multifaceted and sustained approaches are needed to improve the sexual health of ethnic minority communities. Chief among these approaches are improving sexually transmitted infection surveillance and research tools; creating collaborative partnerships with communities; targeting high-risk groups and networks; and improving access to, and the utilization of, proven effective interventions. *Curr Opin Infect Dis* 14:63–69. © 2001 Lippincott Williams & Wilkins.

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## Abbreviations

CBO	community-based organizations
STD	sexually transmitted diseases
STI	sexually transmitted infections

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## Introduction

The past two decades have seen a growing interest in the study of race, culture and ethnicity, and their relationship to sexual health outcomes. This interest has largely been driven by the disproportionate burden of HIV/AIDS and other sexually transmitted infections (STI) experienced by migrant communities in western industrialized states [1]. However, even within countries with indigenous or 'native' minorities, similar patterns of disease variations exist [2–4]. Efforts to explain these observations vary over time and with the disease under observation, with differences in genetic susceptibility [5–7], sexual behaviours [8–11], and the utilization of curative services [9], being key contributors. Anthropological approaches have been particularly useful in uncovering sociocultural determinants of sexual ill health, for example, economic deprivation or social exclusion [12,13].

This review considers recent research evidence regarding strategies for improving the sexual health of ethnic minority communities. The term 'ethnic minority' is a relative one, based on demographic, racial (physical characteristics) or cultural (whether religious, behavioural or social) differences from an identified 'ethnic majority'. 'Ethnic minority communities' often comprise a heterogeneous aggregation of population sub-groups, the composition of which varies over time and between locations. It is this diversity that presents both challenges and opportunities for disease prevention and control. Emerging evidence on five strategies will be discussed in this paper: improving surveillance and research tools; working with communities; understanding the cultural contexts; improving access to appropriate services; and targeting high-risk groups and delivering culturally competent interventions.

## Improve surveillance and research tools

Inequalities in sexual health cannot be tackled unless they are identified. In the United States, which has a long tradition of racial monitoring in surveillance and research, ethnic variations in health outcomes were described long before the United Kingdom and other European countries. Political correctness, the fear of stigmatization, concerns about the use of ethnicity/race as epidemiological variables [12,14–18], continue to hamper this process in many countries, and undoubtedly contribute to perpetuating inequalities [19]. Possible solutions include questioning the purpose and utility of collecting ethnicity data; using ethnicity data to understand cultural mores that are relevant to behaviour

modification [20]; and ensuring that target communities are consulted and engaged in the development of research and surveillance programmes.

Nevertheless, the available data are compelling. Surveillance data from the USA, Canada and the UK show an increasing concentration of the HIV/AIDS and bacterial STI among poor, inner city and ethnic minority populations [21–23]. In the USA, racial/ethnic minority populations account for an increasing proportion of AIDS cases, including cases among men who have sex with men [24,25]. In the UK, black African communities (particularly those of sub-Saharan origin) bear the brunt of the heterosexual HIV/AIDS epidemic [26\*]. Although only a quarter of reported HIV infections were acquired heterosexually, HIV infections acquired in Africa formed 64% of all reported heterosexually acquired infections, and 84% of those acquired abroad [26\*]. Population and sexually transmitted disease (STD) clinic-based ad-hoc studies support the surveillance data. A high prevalence of current and reported STI and high-risk behaviours have been reported among poor, urban, minority communities [9,27–29]. Persistently high rates of syphilis among urban poor African Americans in the south-east USA are well documented [30\*,31,32\*,33]. Other studies [34–36] have shown similar concentrations of bacterial STI, including gonorrhoea and chlamydial infection, in developed country settings.

In many of these settings the availability of ethnicity-specific data enabled more detailed characterization of local and national epidemics; the identification of public health priorities; and improved targeting of control interventions. Investment in, and the development of, robust STI surveillance systems that are capable of detecting and monitoring ethnic variations in disease outcomes, should be prioritized.

### **Establish partnerships with affected communities**

Participatory research and interventions remain key strategies for improving the health of marginalized communities [37\*]. Participatory research was initially developed to improve social and economic conditions of the people being studied, and to provide a framework for responding to health issues within a social and historical context [37\*]. It is particularly relevant for improving the sexual health of ethnic minority communities, among whom the fear of stigmatization, and mistrust of research and researchers may be problematic [38]. The benefits of community participation include self-empowerment, capacity development, improved social capital, and increased lay involvement [39,40]. Community partnerships may be created at any phase of an intervention, but are strengthened when groups are involved from the

conceptual phases of its design, implementation, analysis and dissemination.

In one recent study, the Mayisha project [41\*\*], collaborative research partnerships were established with African community-based organizations (CBO) in inner London to undertake much-needed research on sexual attitudes and lifestyles among high-risk African communities. Ten volunteers from local African CBO were nominated to join the project's research team. All participated in a research training programme before participating in the development of study questionnaires, undertaking community-based recruitment in social and commercial venues, and producing the study reports and outputs [42]. Post-study evaluation revealed high acceptance and ownership by CBO volunteers, high awareness and acceptance to research among the affected communities, and improved social capital through community empowerment [43\*].

However, establishing community partnerships can be time-consuming and resource intensive. In ethnically diverse communities, researchers may collaborate with a minority section of the population that does not represent the collective interests of the entire community. The roles, responsibilities and contributions from researchers and community members may shift during the lifetime of the project, and partners may change their agendas [37\*,43\*]. Nevertheless, community participation can and does promote respectful and productive partnerships between researchers and the community, and should be encouraged wherever possible.

### **Identify and understand the cultural context**

Anthropological investigations using qualitative techniques (for example, participant observation or focus groups) have made a significant contribution to our understanding of the cultural influences on sexual health. Many culturally prescribed practices influence STI transmission risk; for example, the use of vaginal herbs [44,45], circumcision [46,47], vaginal douching [48,49], assortative sexual mixing [11,50,51] and polygamy/concurrency [11,52,53]. These behaviours may subsequently be targeted for behavioural modification, risk reduction or harm minimization.

However, one's cultural background may have wider influences. Recent qualitative work with ethnic minorities in Britain suggests that the cultural influences on sexual health are mediated through a variety of factors, including religious beliefs and perceived gender roles [54\*\*]. These factors in turn influence how individuals learn about sex, the timing and nature of their initial sexual experiences, their preference for, and choice of, sexual partners, and attitudes towards sexual risk taking [54\*\*]. The research also highlighted the changing

nature of ethnicity. Among British-born second and third generation ethnic minorities, the progressive shift of prescribed 'cultural norms' towards those of the ethnic majority was observed, a process of acculturation [54\*\*]. Attitudes towards homosexuality and other 'alternative lifestyles' were thus typically less negative among UK-born and educated ethnic minorities than those of a similar age born and schooled abroad.

Finally, cultural influences are located within the wider social and economic determinants of poor sexual health. For example, a number of environmental determinants have driven the hyperendemic persistence of syphilis in the southern USA. These include access to healthcare services, race relations, employment opportunities, and poor STD outreach activities [55]. All of these factors are associated with a failure of public health systems in meeting the needs of the most disadvantaged communities. Similarly, high rates of gonorrhoea in London are located within the most deprived areas in Britain [34]. Trying to affect behaviour modification within these communities, in the absence of concomitant social and economic interventions, will be futile.

### **Improve access to and utilization of sexual health services**

Ensuring access to sexual health services remains a key strategy for reducing the burden of STI [56]. However, communities may still fail to use them, even when accessible, quality diagnostic and treatment services are provided. Elam *et al.* [54\*\*] found that although STD clinics were seen as being anonymous and confidential, clients were often dissatisfied with unsupportive attitudes of reception and medical staff, the poor physical conditions of clinics, and long waiting times. When asked how to improve these services, the provision of staff cultural awareness training, and increased screening in general practitioner clinics were suggested. Erwin and Peters [57\*] found that the social circumstances of HIV-positive black Africans living in London combined with differences in cultural beliefs and experience of healthcare in the UK, gave rise to particular concerns about taking antiretroviral therapies. These included the fear of being experimented upon, lack of confidence in drugs tested only on Caucasians, distrust of the medical profession and fears of discrimination. As with all HIV-positive individuals, concerns about when to start treatment, fears of side-effects and compliance were commonplace.

When communities are particularly hard to reach, or do not routinely access healthcare services, community-based screening and treatment for STI may be useful. Pack *et al.* [58\*] assessed the prevalence of STD among a sample of incarcerated 14–18-year-old minority males in a southern USA city. The cross-sectional study involved

screening for gonorrhoea and chlamydia using ligase chain reaction tests. They found a high prevalence (18%) for either gonorrhoea, chlamydia, or both, and approximately 84% were asymptomatic. The authors called for routine STD screening and STD prevention programmes for adolescent males in detention facilities. Although much work has been done on opportunistic STI screening of women in outreach settings, very little has been done for men [59\*]. This represents a relatively unexploited area for intervention, and could have the additional benefit of increasing men's interest in their sexual health. The provision of outreach STD diagnosis and treatment services are particularly important intervention strategies in concentrated or hyperendemic STI prevalence situations [60].

### **Target sexually transmitted disease clinic attenders**

STD clinics are more likely to be utilized by individuals with high-risk sexual lifestyles [61], and therefore are a prime site for interventions to improve sexual health. Previous studies [28,29,36,62–64] have shown that even among STD clinic attenders, race/ethnicity is an important and independent predictor of being diagnosed with an STI (including HIV infection).

Ethnic minorities are at increased risk of being diagnosed with a subsequent STI. Fortenberry *et al.* [65\*], in a prospective cohort study of adolescent females aged 15–19 years attending STD clinics and community-based centres, found high rates of reinfection with acute STI within 12 months of initial infection. Re-infection was associated with black race, gonorrhoea at initial diagnosis, and initially two or more partners in the previous 3 months. Condom use was associated with a reduced risk of infection. Wagstaff *et al.* [66\*], in a sample of 15–19-year-old African American male STD clinic attenders, found that within 12 months of the baseline, 31.3% returned for treatment for an infection. Subsequent infection was positively associated with the age at first intercourse, parity, previous history of STD, commercial sex and perceived risk of infection. The high rates of re-infection are alarming and represent a failure of STD clinic-based prevention activities. This justifies the need to target intensive STD clinic-based behavioural interventions with these groups.

Among STD clinic attenders, high-risk sexual behaviours may be associated with illicit drug use [67–69]. Cocaine is considered to be a co-factor in the acquisition of STI, including HIV infection. Users may engage in a number of practices that put them at increased risk, including multiple sex partners, infrequent or no condom use, prostitution and the exchange of sex for drugs. Cocaine may also influence HIV transmission directly through peri-oral ulceration and indirectly

through its association with the concurrent or progressive incidence of injecting drug usage. Hser *et al.* [70], in a cross-sectional study of 1490 STD patients in Los Angeles, found high-risk behaviours to be associated with younger age, male sex, crack cocaine use (women only), ethnicity and having an arrest history (men only). The authors suggested that sex-specific strategies may be required for intervening in this population. However, other interventions may include establishing collaborative links between STD clinic and drug treatment services to facilitate inter-agency referrals, and holding outreach STD clinics within drug treatment services.

### Interventions with sexual and social networks

Effective STD prevention programmes must identify and target disease transmission occurring within the community. This may require the identification of 'core groups' or sexual and social networks, which sustain local STD epidemics [60]. These groups are characterized not only by their high rates of partner change, but also the nature of contact with curative health services.

Sexual mixing may be an important determinant of STD transmission dynamics at the population level, and an important risk factor for infection at the individual level. Aral and colleagues [71] found that partnerships that were discordant in terms of race/ethnicity, age, education and numbers of partners were associated with a significant risk of gonorrhoea and chlamydial infection. The study highlighted the importance of STD prevalence in sub-populations as key determinants of STI incidence in the overall population. They concluded that social determinants of health outcomes (e.g. race/ethnicity, sex and age) were more important than behavioural determinants (e.g. sexual behaviour).

Further work by Stoner *et al.* [72\*] underscored the importance of understanding sexual networks in disease prevention. They conducted face to-face interviews with index patients with gonorrhoea and chlamydia and their named sex partners, as well as the partners of infected partners. Gonococcal-network members differed significantly from chlamydial-network members in a number of demographic variables, including race or ethnicity, education, and unemployment status. Gonococcal-network members were more likely to report more sex partners, a past history of crack-cocaine use, sexual assault, and having been in jail, than did chlamydial-network members.

Social networks strongly influence the spread of communicable diseases, and STI are dependent upon who has sex with whom. Understanding the role of sexual networks in the spread of bacterial STI can help identify strategies for targeting interventions with ethnic minorities.

### Delivering culturally competent behavioural interventions

In the absence of an effective cure or vaccine, many AIDS preventive measures have focused on education to prevent and reduce high-risk behaviours associated with HIV/AIDS transmission. Behavioural interventions seek to reduce the risk of acquiring or transmitting HIV or other STI by changing behaviours that lead to the transmission of infection [73]. Strategies to change behaviour can be divided into four stages: information dissemination; motivation and persuasion; self-efficacy and skills development; and community support to sustain behavioural change. Culturally competent interventions suggest that interventions are appropriate, relevant and acceptable to the communities being targeted. Clearly, one way of achieving this is by utilizing participatory research methods as mentioned previously.

A number of STD clinic and community-based behavioural interventions among ethnic minorities have been evaluated to date [74–78]. Shain and colleagues [74] evaluated the effectiveness of three small group sessions of 3–4 h each, designed to help women recognize personal susceptibility, commit to changing their behaviour, and acquire the necessary skills. The design of the intervention was based on the AIDS Risk Reduction Model and ethnographic data on the study populations. The control group received standard counselling about sexually transmitted diseases, and all participants underwent screening, counselling, and an interview before randomization and at the 6 and 12 month follow-up visits. A total of 424 Mexican-American and 193 African-American women were enrolled. The rates of subsequent infection were significantly lower in the intervention group than in the control group during the first 6 months (11.3 versus 17.2%,  $P=0.05$ ), during the second 6 months (9.1 versus 17.7%,  $P=0.008$ ), and over the entire 12 month study period (16.8 versus 26.9%,  $P=0.004$ ). The authors concluded that a risk-reduction intervention consisting of three small group sessions significantly decreased the rates of chlamydial and gonorrhoeal infection among Mexican-American and African-American women at high risk of STD.

More recently, Lauby and colleagues [79\*\*] examined the effects of a multi-site community-level HIV prevention intervention on low-income, primarily African-American women in four urban communities. After 2 years of intervention activities, increases in the rates of talking with main partners about condoms, and in the proportion of women who had tried to get their main partners to use condoms were significantly greater in intervention communities than in comparison communities.

Behavioural interventions to reduce the risk of HIV/AIDS can be effective. However, they need to be pragmatic, generalizable, and acceptable to clients and staff. The most successful interventions require a significant investment in creating networks with local communities. Pre- and post-study anthropological investigations are especially useful in providing a comprehensive understanding of social networks, as well as the organizational, cultural and environmental factors that influenced behaviour. The lack of evidence regarding behavioural interventions among ethnic minorities in the UK and Europe is worrisome, and points to areas for future prioritization. Further research must focus on emerging risk groups, particularly ethnic minority women and young people.

## Conclusion

Persistent and worsening ethnic inequalities in sexual health outcomes represent a public health failure, and demand urgent prioritization and investment. However, these inequalities form part of a wider spectrum of health inequalities, which are primarily driven by socio-economic, rather than behavioural, factors. Behavioural strategies that focus on the individual should therefore be supplemented with efforts to create economic, political and social environments that support behavioural change. Strategies to improve the sexual health of ethnic minorities must be multi-faceted, and combine both medical and social approaches along with comprehensive involvement of affected communities.

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## APPENDIX<sub>3</sub>

### GUM CLINIC STUDY: DATA COLLECTION PROFORMA

<b>Patient number:</b>	1	<b>Study number</b>				
<b>Date of presentation:</b>	3	<b>Date of Birth :</b>				
<b>Source :</b>	GP <sub>1</sub> N/A <sub>99</sub>	Self <sub>2</sub> Hosp <sub>3</sub> Other <sub>4</sub>	5	<b>Sex:</b>	male <sub>1</sub> female <sub>2</sub>	
<b>Sexuality:</b>	Hetero <sub>1</sub>	Bisexual <sub>2</sub> Gay <sub>3</sub>	Lesbian <sub>4</sub>	N/A <sub>99</sub>		
<b>Ethnic: categories</b>	White <sub>1</sub> Mixed <sub>2</sub> Other <sub>3</sub>	Black African <sub>4</sub> Black Caribbean <sub>5</sub> Black (other) <sub>6</sub>	Bangladeshi <sub>7</sub> Pakistani <sub>8</sub> Chinese <sub>11</sub> Indian <sub>9</sub>	Asian (other) <sub>10</sub>		
<b>Post Code:</b>	N <sub>1</sub> NW <sub>2</sub> SW <sub>3</sub> SE <sub>4</sub>	E <sub>5</sub> EC <sub>6</sub> W <sub>7</sub>	WC <sub>8</sub> Other <sub>9</sub>	9	<b>Where?</b>	
<b>Marital Status:</b>	Married <sub>1</sub>	Single <sub>2</sub>	Divorced <sub>3</sub>	Cohabiting <sub>4</sub>	N/A <sub>99</sub>	
<b>Presenting Complaint</b>	Symptoms <sub>1</sub> Contact <sub>5</sub>	Screen (no HIV test) <sub>2</sub> Other <sub>6</sub>	N/A <sub>99</sub>	Screen (+HIV test) <sub>3</sub>	HIV Test only <sub>4</sub>	
<b>Current : Relationships</b>	Regular Partner	YES <sub>1</sub>	NO <sub>2</sub>	N/A <sub>99</sub>		
	Length of relationship	<1 mth <sub>1</sub>	1-6 mths <sub>2</sub>	>6 mths-1yr <sub>3</sub>	>1year <sub>4</sub>	N/A <sub>99</sub>
<b>Last Sexual: Contact</b>	Date (weeks since)	15	<b>Contact abroad?</b>	YES <sub>1</sub>	NO <sub>2</sub>	N/A <sub>99</sub>
	LSC Partner	RegM <sub>1</sub>	RegF <sub>2</sub>	KnM <sub>3</sub>	KnF <sub>4</sub>	CasM <sub>5</sub> CasF <sub>6</sub> N/A <sub>99</sub>
	Condoms used	YES <sub>1</sub>	NO <sub>2</sub>	N/A <sub>99</sub>		
<b>Previous Sexual Contact</b>	Date (weeks since)	N/A <sub>99</sub>	RegM <sub>1</sub>	RegF <sub>2</sub>	KnM <sub>3</sub>	KnF <sub>4</sub> CasM <sub>5</sub> CasF <sub>6</sub>
	LSC Partner	N/A <sub>99</sub>	YES <sub>1</sub>	NO <sub>2</sub>	N/A <sub>99</sub>	
	Condoms used		YES <sub>1</sub>	NO <sub>2</sub>	N/A <sub>99</sub>	
<b>Prior Stds:</b>	YES <sub>1</sub>	NO <sub>2</sub>	N/A <sub>99</sub>			
<b>Type of: Infections</b>	GC <sub>1</sub> HSV <sub>5</sub> N/A <sub>99</sub>	NSU <sub>2</sub> HPV <sub>6</sub>	Syphilis <sub>3</sub> Tropical STD <sub>7</sub>	Chlamydia <sub>4</sub>	Other <sub>8</sub>	23 24
<b>Prior HIV Test</b>	YES <sub>1</sub> NO <sub>2</sub>	26	<b>When?</b>	<1year <sub>1</sub>	1-3 years <sub>2</sub>	>3 years <sub>3</sub>
	N/A <sub>99</sub>		<b>Last Test Result?</b>	Positive <sub>1</sub>	Negative <sub>2</sub>	nknown <sub>99</sub>
<b>Diagnoses :</b>		29				
		30				
<b>Last Cervical Smear</b>	<1year <sub>1</sub>	1-3 years <sub>2</sub>	>3 years <sub>3</sub>	N/A <sub>99</sub>		
<b>Contraception:</b>	YES <sub>1</sub>	NO <sub>2</sub>	N/A <sub>99</sub>	34	<b>Type?</b>	OCP <sub>1</sub> IUD <sub>2</sub> condoms <sub>3</sub> other <sub>4</sub>
<b>Pregnancies:</b>	No. of Previous Pregnancies	36	No. of Previous miscarriages			
	No. of prior terminations	37				

PLACE PATIENT  
STICKER HERE

Where information is **NOT AVAILABLE** always code as '99'.  
Where information is **NOT APPLICABLE** code as '88'

## APPENDIX 4

### RESEARCH SUMMARY OF THE EXPLORING ETHNICITY AND SEXUAL HEALTH STUDY











## APPENDIX 5

# EXPLORING ETHNICITY AND SEXUAL HEALTH STUDY: TOPIC GUIDE

## ExES Study: Exploring Ethnicity and Sexual Health. Topic Guide

### 1. Introduction

- This is a study for Camden and Islington Health Authority
- It is about how people view sex and sexual health, and how people feel about talking about sexual matters
- Respondents may remember a few years ago there was a large national study on sexual attitudes and lifestyles in Britain. This study will provide additional information on the views and experience of people from ethnic minority groups.
- This study will help the health authority understand more about how health services might be improved.
- Brief outline of interview

Explain:

Timing

Tape recording

Confidentiality

### 2. Personal Circumstances

- *Can you tell me bit about yourself*
  - age
  - who lives with respondent (relationship), children
  - partner
  - employment / last occupation or other activities / and partner's
  - how long lived at current residence / owned or rented
- *Time spent living in the UK and other countries*
  - how long lived in the UK
  - where born
  - other countries lived / went to school or college - check for pre-school years, primary school and secondary school years
  - parents: occupation / migration history
  - siblings: ages / differences in migration history

### 3. Learning about Sex

I would like to start by asking you about your experiences of learning about sex.

- *How first found out about sex*
  - age
  - what was learnt / discovered
  - views about what was learnt - how helpful or misleading
- *Other ways sex was found out about*
  - formal explanations about things to do with sex e.g. from family, school, sex-education, cultural rites / events, friends and others
  - informal sources of knowledge / how found out about other sources
  - talking about sex; opportunities for discussion
  - continued learning / critical stages
  - preferred sources of information
- *What sort of things were learnt about sex*
  - content: what was covered; what was left out e.g. intercourse, roles, different practices, contraception, infections and diseases, safer sex, condoms
  - timing of information / learning
  - most important / useful types and sources of information
- *Influences on learning and views about sex*
  - attitudes and behaviour of other people e.g. parents; people own age; people within same ethnic group
  - religious influences
  - media
  - most important influences
  - importance of cultural factors; 'typical' experience for people from ethnic group

#### 4. Sexual history and relationships

We've spoken about how you learned about sex. I'd like to talk now about the sexual experiences you've had.

- *First sexual experience of any kind*
  - age
  - what happened
  - how felt about / whether ready for first experience
- *First time had sexual intercourse*
  - age
  - what happened [including use of contraception]
  - details of partner / type of relationship / continued relationship
  - decision making / reasons
  - how felt about / whether ready for it
  - other sexual experiences of any kind before then: e.g. kissing, petting, masturbation

- *Sexual encounters and relationships since first sexual intercourse*
  - types of sexual encounters / relationships since then e.g. long-term; short-term; 'one night stands' or casual encounters; outside a relationship; paid for; current partnership status; changes in lifestyle
  - number of encounters / relationships
  - definitions of partners and relationships: inclusions; exclusions
  - decision making about when to have relationships / encounters
  - finding partners / networks
  - decisions about choice of partner: age, race preferences
  - importance of sex / within relationships

- *Current partner*
  - how met / length of relationship
  - how often have sex / importance of sex
  - communicating about sex / initiating sex

- 450
- *Contraception*
    - current use / changes in use
    - where obtain contraception / advice about contraception
    - attitudes towards contraception / factors which influence preferences
    - abortion - experience / attitudes towards

- *Attitudes towards different types of sexual encounters / relationships*
  - sex before marriage / cohabitation
  - sex outside of a relationship / during (economic) separation
  - casual sex e.g. one night stands / number of partners
  - arranged marriage
  - more than one sexual relationship at a time
  - same sex
  - paid for sex [made or received payment]
  - differences in views of partners; friends; parents and parents' generation; and culture in general

- *Attitudes towards different types of sexual practices*
  - oral sex
  - masturbation
  - anal sex
  - wet / dry sex [and other culturally specific practices]
  - difference in attitude among: partners; friends; family; culture

#### 5. Travel and sex

I'd like to talk now about any travel that you've done and any sexual experiences you've had when you travel

- *Contact with 'home' country / country of birth outside UK*
  - last time visited; how often visited; circumstances of visit
  - own sexual experiences while abroad
  - own attitudes towards sexual experiences while abroad
  - attitudes / experiences of others while abroad: partner's; friends'; family / parents' generation; cultural influences
  - attitudes / behaviour of people from 'home' country visiting UK
  - perception / knowledge of risk / extent of HIV / STD in home country

- *Holidays*
  - experience of holidays abroad
  - sexual experiences when on holiday abroad
  - attitudes towards holiday sex; perceptions of risks / extent of STDs
  - experiences and attitudes of partner; friends; parents' generation

## 6. Safer Sex

I'd now like to talk about a different subject - 'safer sex'. You may or may not have heard of this phrase, or you may have heard of something similar. I'd like to begin by asking if you have heard of 'safer sex'.

- **Understanding and awareness of 'safer sex'**
  - ever heard of it before; where learnt about it / heard of it
  - what does 'safer sex' mean or suggest: why is the term used; what is it used to describe; why is it promoted
  - awareness in relation to HIV and other infections
- **Extent to which 'safer sex' followed**
  - types of sexual practices / experiences can be described as 'safe'
  - experience of safer sex / extent practised
  - decision making / discussion / negotiation with partner
  - influences on safe sex practice
  - condom use: extent; circumstances of use; decisions; attitudes; obtaining them
  - perceptions of 'safe' or 'unsafe' partners
  - changes in sexual practices
  - importance of safer sex / sexual health

- **Types of sexual practices which are not safe**
  - types of practices
  - experience / extent practised: circumstances / decisions
  - types of things uncertain about / worry about how 'safe'
  - types of sexual practices considered too risky / would never do
  - can practices change / be adapted to become safer

## 7. STDs and HIV infection

Some diseases may be caught by having sexual intercourse. I would like to focus on these now.

- **Awareness of any infections / diseases which may be picked up by sex**
  - types of diseases / how diseases are spread; risky practices and circumstances
  - types of people who catch them, more or less at risk; attitudes towards people with HIV / STD
  - how can diseases be avoided
  - perception of own risk of catching / passing on
  - perception of risk among friends; partners
  - experiences: own; partners; people own age
  - awareness of HIV
  - attitudes towards HIV and other diseases
- **Awareness of the symptoms or signs to look out if had a disease**
  - types of symptoms and signs
  - what to do about them
  - HIV testing
- **Sources of treatment of disease or infection**
  - knowledge of different places / services available / who runs them / what do they do
  - awareness of sources of treatment / testing / advice and information
  - type of treatments available
  - experiences / past use made of
  - preferences: specialist; hospital; GP; other
  - barriers to use
  - importance of preventing disease / infection / how can it be prevented
- **Improvements to services and information**
  - forms of encouragement / promotion of safer sex / contraception / healthy sexual lifestyle
  - improvements to information about sex / sexual health / safer sex
  - who should be targeted / ages / type of information required

## 8. Attitudes towards being questioned

Finally, we've come to the end of the interview. I would like to ask you how you felt about participating and the sorts of things you've been asked to talk about

- *Attitudes towards taking part in the project*
  - how feel about a study like this being done
  - reactions when study introduced on the doorstep
  - reactions to letters and leaflets
- *Types of questions asked*
  - subjects
  - language and words used: masturbation / anal sex
  - difficult / embarrassing questions / not understood
  - better ways of being asked and responding for certain questions.
  - how easy is it to be accurate / honest
- *Type of interviewer*
  - kind of person easiest to be interviewed by e.g. gender / age / ethnic group
- *Anything not talked about because...*
  - unsure if relevant to interview
  - embarrassed to discuss

### Interviewers:

- respondent payment
- receipt for respondent payment - signed, name and address on back
- useful numbers at Mortimer Market Centre - general appointments 0171 530 5050 or health advisers /psychologists 0171 530 5111
- label tapes for transcription
- additional notes on tape
- check recording

## APPENDIX 6

### EXPLORING ETHNICITY AND SEXUAL HEALTH STUDY: STUDY MATERIALS



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## **RECRUITMENT INSTRUCTIONS AND MATERIALS**

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<b>2. RECRUITMENT</b>	<b>4</b>
<b>3. SELECTION CRITERIA</b>	<b>8</b>
<b>4. TIMETABLE AND RECRUITMENT DATES</b>	<b>10</b>

### **SCREENING MATERIALS**

**SCREENING QUESTIONNAIRE**

**CONTACT SHEET**

**APPOINTMENT RECORD**

### **INFORMATION FOR RESPONDENTS**

**APPROACH LETTER**

**APPOINTMENT LETTER**

**ExES RESPONDENT LEAFLET**

**SCPR RESPONDENT LEAFLET**

# SEXUAL ATTITUDES AND LIFESTYLES

## 1. AIMS AND BACKGROUND

### 1. Aims

This is a qualitative study of sexual lifestyles, behaviour and attitudes. 70 in-depth interviews will be conducted among Jamaican, Black African (Ugandan and Nigerian) and South Asian (Indian and Bangladeshi) people living in Camden and Islington.

The primary aim of the study is to provide a greater understanding of cultural differences which influence the sexual attitudes and lifestyles of ethnic minority communities, particularly those which may be affected by HIV or other sexual health outcomes.

The research will also explore attitudes towards discussion of sexual matters, and health needs, as well as experiences of sexual health services and information.

The findings of the study will be used to:

- inform culturally appropriate and effective sexual health promotion, education, services and interventions;
- provide insights into the extent to which the expanding AIDS epidemic in Africa and South East Asia, international travel and migration will influence the epidemiology of HIV in the UK; and
- aid the development of acceptable and appropriate research methodologies and increase participation and item response for future quantitative and qualitative research in sexual lifestyles among ethnic minority groups.

### 1.2 Research team and funders

A team of researchers from UCL Medical School, the Policy Studies Institute and Social and Community Planning Research is conducting the qualitative study. The research is funded by Camden and Islington Health authority.

SCPR and UCL conducted the 1990 National Survey of Sexual Attitudes and Lifestyles which has been used to improve services and had wide coverage in the press. PSI and SCPR conducted the 1994 National Survey of Ethnic Groups in the UK.

There is an advisory group drawn from health service commissioners and people providing health services in the borough.

The UCL ethics committee, health services, and community groups are aware of the study.

### **1.3 Background**

To date there has been little targeted, large scale study of sexual behaviour and attitudes among different ethnic groups in the UK. Results from the National Survey of Sexual Attitudes and Lifestyles (1991) suggested differences between ethnic groups in the UK, but the small size of the ethnic minority groups sampled precluded more detailed analysis. There was also evidence of greater non-response to sensitive survey questions among Asian groups.

There is increasing evidence of a disproportionate growth of HIV / AIDS and high rates of other STDs among some ethnic groups in Britain. Little is known about the factors which influence poorer sexual and reproductive health outcomes among ethnic minority groups in the UK. Current knowledge suggests disparities in health status and access to health care services among ethnic minority communities in the UK.

A growing number of sexual health and partner surveys conducted in the developing world indicate wide regional variation in sexual lifestyles and attitudes, yet the extent to which sexual lifestyles and attitudes persist in populations which have migrated to the UK, and are sustained among subsequent generations, has been mainly uninvestigated. Members of ethnic minority communities who are from, or have close family links with, high HIV prevalence countries may be vulnerable to the current and projected spread of HIV. Very little is known about the extent to which ethnic minorities may be exposed to risk on return to their countries of origin.

There is therefore a need for a better understanding of sexual attitudes and lifestyles, and sexual health awareness among Britain's ethnic minorities in order to inform the development of culturally appropriate sexual and reproductive health promotion programmes and services.

## 2. RECRUITMENT

### 2.1 Aims

The aim of the recruitment exercise is to:

- ensure that the selection of respondents for in-depth interviews includes diversity in terms of age, gender, country of secondary school education, partnership status, and travel to country of family origin;
- reassure respondents of confidentiality;
- address respondents' concerns about the subject matter;
- book appointments with appropriate interviewers, taking into account preferences in term of gender, ethnic group and community language;
- reduce potential attrition; and
- inform future recruitment exercises.

### 2.2 Summary of recruitment process

The recruitment will be carried out in areas within Camden and Islington known to have relatively high proportions of the communities concerned with the aid of a household screen (these will be identified with the aid of small area statistics). The screen will involve a short interview to establish eligibility (ethnic group and age) and select respondents according to quota controls. Appointments will be booked and respondents provided with a letter confirming details of the interview; a leaflet about the study; and an SCPR leaflet. All respondents will receive £15 as a thank-you for their time when the interviewer visits. Detailed notes of the outcome of each contact are required in order to inform future recruitment exercises.

### 2.3 Background about the sample groups

The research will focus on three ethnic groups resident in Camden and Islington:

South Asian (25)	Bangladeshi Indian	- mainly Muslim and English or Sylheti speaking - mainly Hindu and English or Gujarati speaking
African (25)	Ugandan Nigerian	- includes refugees - includes overseas students
Caribbean (20)	Jamaican	

### 2.4 The recruitment step-by-step

#### Selecting an address

All recruitment must be conducted at people's own homes.

Small area statistics will be used to indicate areas of high density of the relevant ethnic groups.

[TO FOLLOW FOR MAIN STAGE]

Once an area has been identified pick a street or block as a starting point. Please vary the types of area e.g. include high rise and low rise estates, houses, quiet residential areas, busier areas with shops as appropriate. Please ensure that no more than one person is recruited per street (unless very long) or block. Only approach private addresses - exclude residential institutions.

Please keep a record of ALL calls, including no reply, non-eligible and refusals. Please keep a detailed note of the reasons for any refusals and probe for the reason for the refusal as appropriate. We need this information to ensure the success of the main stage of the project, and to inform future research methodologies.

Please exclude any employees of Camden and Islington Health authority or anyone engaged in work related to sexual health / promotion. As with all projects, please register with the police station and leave a copy of the approach letter.

## **Introduction**

The front sheet of the screen offers some guidance notes on introducing the survey and how to respond to any queries. This is based on our experience with the National Survey of Sexual Attitudes and Lifestyles (NATSSAL) and associated development work. The follow key points helped secure participation in NATSSAL:

- importance of accurate up-to-date information to help plan health education and services that will safeguard;
- AIDS; and
- there has been some press coverage (Time Out) of the view of black community groups that sexual health services have been neglected for minority groups.

Experience suggests that a short, general introduction is best until the screen has been carried out. It is essential to point out that the interview will be about sexual attitudes and lifestyles and not be secretive about this. In NATSSAL it was helpful to point out:

- we did a similar study people and interviewed a great number of different people who did not find the interview difficult or embarrassing - instead though it was straight forward;
- the selection of respondents is carried using completely random techniques so that whatever people's attitudes are, the whole range will be included and that all kinds of attitudes and experiences are of equal importance in this study - once an address has been selected, we need to interview the selected person to ensure that it is random;
- names and addresses are never attached to the questionnaire; and
- a relaxed, confident, matter of fact approach, unembarrassed, friendly but formal approach.

Please reassure about confidentiality.

Those taking part will received £15 as a thank-you.

Again, please keep a note of anything that is said that encourages or deters people from taking part and of reactions to the subject matter

You will also have approach or appointment letters and leaflets to leave with the respondent. Always leave a copies of the leaflets, and use your judgement about when to introduce the letter. There are two versions of the letter - one for confirmed appointments and one to leave with those who want time to think. Don't push for agreement if they seem very unsure, but call back another time.

## **Question 1**

Code gender - primary quota

## **Question 2**

Check age - primary quota

Anyone under 16 or over 45 is not eligible.

As a courtesy, please seek verbal parental (or guardian) agreement for those aged 16-17. Since 16-17 year olds are adults, we need agreement rather than formal consent or permission.

## **Question 3**

There are three questions to determine membership of eligible ethnic groups. If respondents indicate Black / Black British, please explain that we want to ensure coverage of different family origins. The five groups we wish to include are:

Jamaican - not other Caribbean

Ugandan

Nigerian

Indian - Hindu / Christian (not Muslim, Sikh etc) - and Gujarati (not Urdu speaking)

Bangladeshi - Muslim / Christian - Sylheti / Bengali speaking

## **Question 4**

Partnership status is a secondary quota. Please ensure coverage across all ethnic groups.

Some people may have partners whom they do not live with e.g. a boy / girlfriend or due to economic separation - do not include people who are separated or divorced from their partner within the 'not living with partner' category unless they are referring to another partner.

## **Question 5**

The aim of this question is to ensure coverage of respondents likely to have recent contact and cultural influence from their country of family origin. Country of origin will not reveal this, and length of UK residence may be a sensitive question for some groups.

You will encounter people whose families have lived in the UK for some generations, and others who have recently migrated and recent refugees.

We would also like a note of the **region** in the country - please ask for the nearest big town. This is not a quota control but we need to monitor coverage of different regions within countries since it is known that practices can differ between regions.

### Check quotas

There is a separate quota sheet for each of the five ethnic groups to help you monitor coverage of quotas. Any feedback on ease or difficulty in meeting quotas will be welcomed.

### Appointments

Check preferences in terms of gender, ethnic group and language. Check how important preferences are - and explain that we will do our best, but we may not be able to fulfil all of them - this is also useful information for future studies. If preferences cannot be met, check alternatives (e.g. Nigerian instead of Ugandan woman) and collect contact details - we may be able to arrange a suitable interviewer.

Will need to liaise with other recruiters to avoid double bookings of interviewers. Please don't make more than three appointments a day and not too late in the evening. Please allow at least three hours between each booking. Try not to book interviews more than a week in advance. [Dates available to be provided at briefing]

Note details of appointment and interviewer on screen, appointment sheet and respondent letter and note serial number (SN) - this is the number on the appointment sheet and the interviewer's initials. Leave an appointment letter and leaflets with the respondent - check that they will be free for 1½ to 2 hours.

### Interviewers for the pilot

<u>Respondent group</u>	<u>Interviewer</u>	<u>No. of interviews</u>
Jamaican	Kevin Fenton	2
Asian	James Nazroo	2
African	Gillian Elam	2

### Interviewers for main stage

<u>Respondent group</u>	<u>Interviewer</u>	<u>No. of interviews</u>
Jamaican	Kevin Fenton Beverley Simpson	
Asian	Asma Ahmed - Bangladeshi - Sylheti speaker tbc - Indian - Gujuati speaker James Nazroo	
African	Onesimus Awira tbc	Ugandan Nigerian woman
Respondents preferring a white interviewer or no preference	Gillian Elam Jill Keegan	

### 3. SELECTION CRITERIA

#### 3.1 Eligible participants

Eligible participants must be from one of the following five ethnic groups and age 16 to 45:

<b>Ethnic group</b>	<b>Sub-group</b>	<b>Total</b>		
<b>South Asian</b>	<b>Indian</b>	<b>11 - 12</b>	}	
	<b>Bangladeshi</b>	<b>11 - 12</b>	}	<b>23</b>
<b>Caribbean</b>	<b>Jamaican</b>			<b>18</b>
<b>Black African</b>	<b>Ugandan</b>	<b>11 - 12</b>	}	
	<b>Nigerian</b>	<b>11 - 12</b>	}	<b>23</b>
<b>Total</b>				<b>64</b>

#### 3.2 Primary Quotas

Primary quotas are age, gender and country of secondary school education for each ethnic group.

##### South Asian Ethnic Group

<b>Ethnic Group</b>	<b>Bangladeshi</b>			<b>Indian</b>		
<b>Age</b>	<b>Male</b>	<b>Female</b>		<b>Male</b>	<b>Female</b>	<b>Total</b>
16-24	2	2		2	2	7-8
25-34	2	2		2	2	7-8
35-45	2	2		2	2	7-8
<b>Secondary school location</b>						
UK	3	3		3	3	11-12
Country of family origin	3	3		3	3	11-12
<b>Total</b>	<b>6</b>	<b>6</b>		<b>6</b>	<b>6</b>	<b>23</b>



### Black African Ethnic Group

Ethnic Group		Ugandan		Nigerian		
Age	Male	Female		Male	Female	Total
16-24	2	2		2	2	7-8
25-34	2	2		2	2	7-8
35-45	2	2		2	2	7-8
Secondary school location						
UK	3	3		3	3	11-12
Country of family origin	3	3		3	3	11-12
Total	6	6		6	6	23

### Caribbean Ethnic Group

Ethnic Group		Jamaican	
Age	Male	Female	Total
16-24	3	3	6
25-34	3	3	6
35-45	3	3	6
Secondary school location			
UK	5	5	10
Country of family origin	4	4	8
Total	9	9	18

## 3.3 Secondary Quotas

Secondary quotas are partnership status and travel to 'home' country within the last 5 years.

These quotas are required across the whole sample, but with coverage within each of the three main ethnic groups.

<b>Quota</b>	<b>Categories</b>	<b>Total</b>	<b>per group</b>
<b>Partnership status</b>	partnered - living with partner	30-32	8-10
	partnered - not living together	14-16	3-5
	no current partner	14-16	3-5
<b>Travel to 'home' country</b>	within last 5 years	20-24	5-8
	over 5 years ago	40-44	12-15
<b>Total</b>		<b>64</b>	

In addition, the research team will be recruiting 6 gay men (2 from each main ethnic group) through community networks. Sexuality is not a quota for the household screen, but should this become known please make a note and ensure that not more than 2 gay men are recruited from each ethnic group.

#### 4. Timetable and recruitment dates

##### **January 1997**

24th Topic guide design  
Draw up list of potential researcher-interviewers

##### **February**

11th Steering group meeting  
ditto Agree sample design, selection quotas and screening documents  
ditto Draft approach letters  
19th Finalise topic guide  
25th Feb **Briefing of recruiters for screening**  
ditto Briefing for team for pilot interviews  
26th Feb - 7th March **Pilot household screen (recruit 6-8) and debrief**

##### **March**

w/c 3rd Appoint researcher interviewers  
w/c 3rd / 10th Pilot interviews (6-8)  
by Easter Analysis and feedback on pilot and recruitment interviews  
8th and 9th April Interview training and briefing for research team

##### **April**

7th April **Refresher briefing**  
7th to 30th **Continue screening**  
14th to 30th Conduct of remaining fieldwork  
Begin charting

##### **May**

Complete fieldwork

Complete charting

June / July Data analysis

August / September Reporting

October 1997 Plan dissemination of findings.

Please do not hesitate to contact the research team should you have any queries. Good luck!

# THE ExES STUDY

## Explaining Ethnicity and Sexual Health



P5645

### Screening questionnaire

**Confidential**

### Introduction

Introduce self and SCPR.

Calling about a research study for the local health authority (Camden and Islington) about sexual health and attitudes to sex.

We would like to include as many different people as possible, so we are looking for different types of people (ages, background, religion, language).

May I ask a few questions to see if you might be able to take part?

Stress confidentiality - nothing will be linked with your name and address.

### Reasons to take part

May remember a big study a few years ago (in the press)- this research is following on from that study, part of a big programme of work to prevent the spread of disease and improve services

Concerned to address needs of ethnic minority population

- needs and experiences have been neglected until now
- first study of its kind
- in response to community groups' requests

Improve health services locally and nation-wide

People are worried about HIV and AIDs, the only way to reduce spread and improve services is by finding out what people think - even if respondent is not at risk, we need their views, the study will also help improve services and reduce disease and illness in general

Another big survey is planned - we need to make sure that the survey is relevant to all minority groups

Important that the people we contact take part - everyone's views and situation are of equal importance.

The research team will write a book which will be widely available and be useful people providing and planning health

### Reassurances about confidentiality

No one outside the research team will see their replies or know that they took part

Names and addresses are completely separate to the interview and any results

Will not say anything in the report which identifies people - the results are summarised

Their address is picked at random - we don't know anything about the address

### Reassure about subject matter

We have done similar studies before

Other people who have taken part before have found that it is not as embarrassing as think

Important study, its success depends on respondent taking part

Everyone's views are important - what ever their opinions or experiences

Thousands already have taken part in a large survey in 1990

IF UNSURE - LEAVE LETTER AND LEAFLETS AND CALL BACK AS APPROPRIATE

# THE ExES STUDY

## Explaining Ethnicity and Sexual Health



CONFIDENTIAL

1. GENDER CODE ☐ Female  
☐ Male

2. Can you tell me your age last birthday? WRITE IN ..... AND CODE

- ☐ under 16 → END  
☐ 16-~~45~~24  
☐ 25-34  
☐ 35-45  
☐ 46+ → END

3. This study is will be including people of all religions, languages and lifestyles  
- we need a cross section, can I just check...

- Your religion? ☐ Hindu  
☐ Muslim  
☐ Other.....

- Main languages spoken? ☐ English CHECK ANY OTHERS AT HOME  
☐ Sylheti  
☐ Gujerati  
☐ Other.....

Your ethnic group (not nationality)?

- ☐ Indian  
☐ Bangladeshi  
☐ Jamaican  
☐ Ugandan  
☐ Nigerian  
☐ Other

CHECK ELIGIBILITY	Ethnic group	Religion	Language
	<input type="checkbox"/> Bangladeshi	Muslim	Sylheti / English
	<input type="checkbox"/> Indian	Hindu / Christian	Gujerati / English
	<input type="checkbox"/> Ugandan	any	any
	<input type="checkbox"/> Nigerian	any	any
	<input type="checkbox"/> Jamaican	any	any
	<input type="checkbox"/> Other	→ END	

4. Can I check, do you have a husband / wife or partner whom you live with?  
If no, do you have a partner, boyfriend / girlfriend at the present time?  
CHECK CHILDREN IN HOUSEHOLD AND AGES.

- ☐ Partner - living together → SCREEN PARTNER IF NECESSARY  
☐ Partner - not living together  
☐ No current partner  
☐ Children → IF 16+ SCREEN AS NECESSARY

5. And in which country did you have secondary school education? CHECK REGION

- | Country                               | Region |
|---------------------------------------|--------|
| <input type="checkbox"/> UK           | .....  |
| <input type="checkbox"/> Home country | .....  |
| <input type="checkbox"/> Other        | .....  |

6. And finally, when did you last visited your 'home' country / country of family origin?

- ☐ Within last 5 years (since 1992)  
☐ Over 5 years ago (before 1992)

---

**IF RESPONDENT FITS QUOTA - EXPLAIN DEPTH INTERVIEW AND MAKE APPOINTMENT - LEAVE APPOINTMENT LETTER AND LEAFLETS**

Name: Mr / Mrs / Miss / Ms First name.....Surname.....	
Address.....	
'Phone .....	
Appointment Date.....	Time.....
Interviewer .....	SN.....

**CHECK INTERVIEWER PREFERENCES**

	Essential	Preferable	None
Gender: Male / female	.....	.....	.....
Ethnic group: Own / other	.....	.....	.....
Language: .....	.....	.....	.....

COMMENTS:.....

Interviewer-recruiter name and number.....

## NOTES

# THE ExES STUDY

## Explaining Ethnicity and Sexual Health



University College London Medical School. Mortimer Market Centre, off Capper St. London WC1E 6AU. 0171-380-9660  
Social and Community Planning Research. 35 Northampton Square, London EC1V 0AX. 0171-250-1866  
Policy Studies Institute. 100 Park Village East, London NW1 3SR. 0171- 468-2203

**DRAFT**

February 1997

### Study of sexual attitudes and lifestyles

Thank you very much for agreeing to be interviewed in this research project. The study is funded by Camden and Islington Health Authority and is being carried out by a team of researchers from a hospital and two independent research institutes.

#### Why the research is being done

The need for information on this subject has long been felt by doctors and many others providing health services. There has never been before a study that provides reliable information which is relevant to ethnic minority groups living in Britain. The need for such a study has become particularly urgent because of the impact of HIV and AIDS on minority groups (the interview itself will not be about HIV and AIDS). A leaflet about the survey, which contains full details, will be given to you by the interviewer. It is a very important study and each individual's views and experiences, whatever they may be, are of equal value. Your views will help improve health services for people in future.

#### What will the interview be like

The research will involve an informal interview lasting around an hour to an hour and a half, at your home. Details of the time and date of the interview are below. The interviewer will carry an identity card with their photograph. Although some people, when first approached, feel a little reluctant about taking part, we know from experience that almost everyone finds the interview straight forward and of interest. Everyone taking part in this study will receive £15 as a thank you for your time.

#### What will happen to your replies

All information you give will be in strict confidence. No one outside the research team will see any of the information you give or know the names of the people taking part. Names will not be linked with the results or used in the report at the end of the study.

Please do not hesitate to contact us if you have any queries or would like further information.

Yours sincerely

Research Team

Interviewer's name.....(P5645)

Date of interview.....March 1997      Time of interview..... AM / PM

The ExES Study; Exploring Ethnicity and Sexual Health

**P5645**

## CLAIM FORM FOR FEES AND EXPENSES

### FEES

PLEASE ENTER  
AMOUNT BEING  
CLAIMED

**Training and briefing** (£500) £ \_\_\_\_\_  
**Briefing on analysis** (£100) £ \_\_\_\_\_  
**Conduct of interviews**

Number ..... @ £100 per interview £ \_\_\_\_\_

PLEASE LIST SERIAL NUMBERS

### Analysis of interviews

Number ..... @ £150 per interview £ \_\_\_\_\_

PLEASE LIST SERIAL NUMBERS

### Translation

Number ..... @ £100 per interview £ \_\_\_\_\_

PLEASE LIST SERIAL NUMBERS

### EXPENSES

#### Travel

Serial number	Date	Location	Mode of travel	Expenses
				£ p
				£ p
				£ p

**Other miscellaneous please specify** £ p

Name \_\_\_\_\_

Address \_\_\_\_\_

Bank: Name \_\_\_\_\_ Sort code

Account No: \_\_\_\_\_

Signature of claimant \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Authorisation \_\_\_\_\_



## WHAT ARE YOUR RIGHTS?

As a voluntary study, the project depends for its success on the co-operation of the vast majority of people we approach. Nonetheless, you have the right to refuse to take part at all or, having agreed, to refuse to answer any question, or to stop the interview at any point. We will respect these rights absolutely. But we urge you to give the study a fair chance (however reluctant you may feel) as thousands of others have done in our past studies. Almost everyone who agreed to take part has completed the interview with little or no embarrassment. The interview should not take much of your time.

You also have the right to absolute confidentiality so your participation will be anonymous; neither your name nor your address will ever be linked with your replies, or be identifiable in what we publish, or passed to anyone outside the research team, or used for any other purpose whatsoever.

## FURTHER INFORMATION

If you want any further information about any aspect of the study, do not hesitate to ask for it. In the first instance ask the interviewer who will try to answer fully. But if you need further details, 'phone or write to SCPR (address and telephone number below), and direct your questions to Gillian Elam or Jane Ritchie.



# Study of Sexual Attitudes and Lifestyles

1997



Supported by Camden and Islington Health Authority

## WHY STUDY THIS SUBJECT

Up to now there has been almost no reliable study of sexual attitudes and lifestyles among people from ethnic minority groups living in Britain. Yet doctors and health service providers, as well as scientists, need such information urgently. Without it they do not know, for instance, how best to tackle the spread of diseases such as AIDS which has become one of the most feared illnesses throughout the world and is having an increasing impact on some minority groups. Some studies have recently been carried out among particular groups, including a National Survey of Sexual Attitudes and Lifestyles in 1990. Although this was a large survey, it did not contain large enough numbers of people from the many different ethnic groups in Britain.

And it is not just the arrival of AIDS that makes a study of this sort necessary. It is urgently needed also to help planners of services concerned with other sexually transmitted diseases, and with services related to childbirth, family planning and health education. Ethnic minority community groups have continually called for such a study to help improve health services and make services more relevant to people from different ethnic minority groups.

If we are to be prepared as a nation for future problems too, we need to understand more about our sexual attitudes and behaviour, and how they are changing. Neither the medical world nor governments can afford to remain ignorant about these matters any longer. That is why this study is being conducted. The World Health Organisation has set in progress a large programme of collaborative studies on this subject. So this project will be of international importance when studied alongside those from other countries.

## HOW DID YOUR ADDRESS COME UP?

To undertake a study of this sort, we need to select people entirely at random. Otherwise there is always a risk of getting biased results. In this case we have selected addresses at random in Camden and Islington. Then, at each address, we have to select one adult, again by special selection techniques. Having made these two selections we are not permitted to take substitutes - either for an address or for a person. This means that any address which does not produce an interview is, in effect counted as a failure. And if we got too many failures, the results of the study will not be reliable and could not be used with the confidence that is needed.

## WHO IS INVOLVED IN THE RESEARCH?

Researchers within one hospital, University College (UCL) and two independent research institutes, Social and Community Planning Research (SCPR) and Policy Studies Institute (PSI) are all actively involved in the study.

These organisations have all been involved in other studies of sexual attitudes and lifestyles and studies among people from different ethnic groups, but have now got together to carry out, in 1997, what is intended to be the key British study on the subject.

The principal researchers are Prof. Ann Johnson and Dr. Kevin Fenton at UCL, Dr. James Nazroo at PSI, and Jane Ritchie and Gillian Elam at SCPR.

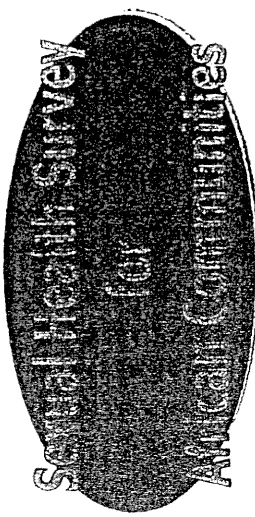
## APPENDIX 7

### MAYISHA STUDY: QUESTIONNAIRE



# MAYISHA

Taking care of our lifestyles



This survey aims to help us develop services to make them more relevant to you. Some of the questions are of a personal nature. However your replies will be very useful.

**This questionnaire is strictly anonymous and confidential. Do not write anything that could identify you**

**Please answer questions as fully and as accurately as possible.**

**Project conducted by:**  
Camden & Islington Community NHS Trust, London  
Royal Free & University College Medical School  
University College London

**led by:** AVERT

**laboration with:**  
London East AIDS Network  
London Ecumenical AIDS Trust  
Pamodzi  
Swahili Refugee Group  
Zimbabwe HIV Forum  
by/a Baganda  
Zairian Refugee Group



**Please tick, number or write as appropriate.**

- Gender Male ☐ Female ☐
- Age  years old  
(on last birthday)
- What is the area you live in?  
(first half of postcode only, eg. NW1)

--	--	--	--	--

- Which nationality best describe you?

--	--	--	--	--	--	--	--	--	--

Congo/Zaire  
Kenya  
Uganda  
UK  
Zambia  
Zimbabwe  
Other nationality (please specify)

- In which country were you born?  
(please specify)

If born in another country, how long have you been living in the UK  
 years

- In what country were you living when aged 10 – 16 years old?

--	--	--	--	--	--	--	--	--	--

Congo/Zaire  
Kenya  
Uganda  
UK  
Zambia  
Zimbabwe  
Other country (please specify)

- Are you currently (tick one or more)

--	--	--	--	--	--	--	--	--	--

Employed  
Unemployed  
Home/family caring  
Full-time education  
Part-time education  
Other (please specify)

- What is the highest level of formal education that you have achieved?

--	--	--	--	--	--	--	--	--	--

None  
Primary / Elementary  
Secondary / High School  
University / College  
Professional training  
Other (please specify)

- At present, are you (please tick one)

--	--	--	--	--	--	--	--	--	--

Married  
Widowed / Separated / Divorced  
Living with partner  
In relationship (not living together)  
Single

- Have you ever been diagnosed with a sexually transmitted disease (STD/VD), other than HIV

--	--	--	--	--	--	--	--	--	--

Yes ☐ No ☐ Not sure ☐

If Yes, when was the last time you were diagnosed

--	--	--	--	--	--	--	--	--	--

Less than 1 year ago  
1 to 5 years ago  
Greater than 5 years ago

test for HIV (the virus that causes AIDS)

☐ Yes ☐ No ☐ Not sure

If Yes, when was the last test

☐ Less than 1 year ago  
☐ 1 to 5 years ago  
☐ Greater than 5 years ago

Where did you have the last test?

☐ GP ☐ GUM/STD Clinic ☐ Antenatal (Pregnancy) ☐ Other (please specify)

12. In the last year, how many different partners have you had sexual intercourse with

sexual partners

In the last year, how many new partners did you have sexual intercourse with for the first time?

new partners

With how many of these new partners did you have sexual intercourse, without using a condom?

new partners

13. Did you use a condom the last time you had sexual intercourse?

☐ Yes ☐ No

If yes, was it to stop

☐ Pregnancy ☐ STD/HIV ☐ Both ☐ Other

grains to dry or tighten the vagina can increase sexual enjoyment. Have you or your sexual partner(s) ever used this technique in the UK?

☐ Yes, frequently in the UK  
☐ Occasionally/sometimes in the UK  
☐ No, but I used to back home  
☐ No, not at all (at home or in the UK)  
☐ I don't know

15. In the last 5 years, have you travelled back to your home country (for holiday, work, to see family, etc)

☐ Yes ☐ No ☐ Not applicable

If yes, did you have sex with any different partners while you were away

☐ Yes ☐ No

16. If you were to receive information from someone about sexual health and how to protect yourself from STD's and HIV, which of the following people would you trust the most? (tick one only)

☐ Older family member (parents, uncles, aunts, etc)  
☐ Other family member (brother, sister, cousin, etc)  
☐ Older respected woman (in your community)  
☐ Older respected man (in your community)  
☐ Friends / peers  
☐ Doctor, nurse, HIV/GUM worker  
☐ Religious leader (priest, pastor, etc)  
☐ Other (please specify)

describes your opinion)

☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree

18. Always using condoms during sexual intercourse with new partners would be.... (please tick one box)

☐ Very hard to do ☐ Fairly hard to do ☐ Fairly easy to do ☐ Very easy to do

19. Most people who are important to me do not think I should use condoms with new sexual partners (please tick one box)

☐ Very true ☐ True ☐ Untrue ☐ Very untrue

20. If I was to have sexual intercourse with a new partner, I intend to use a condom. (please tick one box)

☐ Very likely ☐ Likely ☐ Unlikely ☐ Very unlikely

21. I think I could convince a new sexual partner to use a condom, even if they did not want to use one (please tick one box)

☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree

Thank you for filling out this questionnaire  
Please return to researcher in the envelope provided

Site

Date

## APPENDIX 8

### MAYISHA STUDY: STUDY MATERIALS



## The MAYISHA Study

Taking care of our lifestyles

### **What is the MAYISHA study?**

The MAYISHA study is a collaborative research project being undertaken by the Camden and Islington Community Health Services NHS Trust and University College London Medical School. Funded by AVERT, MAYISHA represents a new and innovative model of community involvement and participation in sexual health research through the establishment of formal collaborative links with local African communities. Research on sexual attitudes and lifestyles is needed to inform the development of appropriate sexual health interventions and to guide health promotion activity for local African communities.

### **Which African communities?**

The African Communities team at Camden and Islington Health Promotion Service has identified local Kenyan, Ugandan, Zambian, Zairian and Zimbabwean residents as having distinct needs for sexual health promotion. This reflects the size of these populations within the district, the burden of HIV/AIDS, and current availability of sexual health programmes.

### **What will community groups/ organisations be asked to do?**

As part of the research collaboration, two representatives (key workers) from each community will be asked to join the MAYISHA study team. Ideally these persons should have an interest and some experience in research, have good links with their communities and be effective communicators. The key workers will in turn work closely with the study co-ordinator (Martha) in developing the final design of the study, translating and distributing questionnaires among their own communities.

### **How will African community groups benefit?**

The MAYISHA Study will offer training in research skills to the identified key workers, for which certificates will be awarded. Further, the study will also be recruiting sessional workers from each community to help in questionnaire distribution. They will be paid for their time as well as receive appropriate training in data collection. Finally, the research data will provide specific information regarding the sexual health needs of each African community which will be valuable for planning future activities.

If you have any comments or would like to take part, please contact Martha Chinouya Mudari, your link person with the MAYISHA Study:

**Martha Chinouya Mudari**  
The Archway and Sexual Health Clinic, Archway Wing  
Whittington Hospital  
Highgate Hill,  
LONDON N19 5NF  
Telephone: 0171 530 5806/5813  
Fax: 0171 530 5812

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*MAYISHA principal researchers: Martha Chinouya Mudari (Behavioural Researcher and Study Co-ordinator), Dr Oliver Davidson (Clinical Psychologist and Hon. Senior Lecturer), Dr Kevin Fenton (Lecturer and Public Health Physician), & Dr David Miller (Clinical Psychologist and Hon. Senior Lecturer).*





## STEERING GROUP MEETING

6TH NOVEMBER, 1998: THE MORTIMER MARKET CENTRE

CHAIR: DR. KEVIN FENTON

### AGENDA:

1. Introductions and welcome: the chair
2. Update from the last meeting
3. Project update:
  - The social mapping report
  - Consultation day
  - The position paper
4. The Launch (16.11.98)
5. Quantitative phase and questionnaire design
6. Key worker training (24.11.98)
7. Any other business





# **Minutes of the Mayisha Steering Group meeting**

10am on Monday 18th August 1998 at MMC

Present:

Oliver Davidson (MMC/CICHSNHST) The Chair

Kevin Fenton (MMC/UCLMS)

Tony Nardone (MMC/UCLMS)

Martha Chinouya (ASHC/CICHSNHST)

Juliet Lubega (Health Promotion, CICHSNHST)

Charles Oduka (AFRICARE)

James Lawrence (AVERT)

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## **1. Introductions**

The Chair introduced members of the Steering Group and thanked all present for their participation.

## **2. Content of Meeting**

The agenda was reviewed. MC produced an information pack for the Steering Group.

## **3. Roles and Responsibilities of the Steering Group**

KF discussed the roles and responsibility of the Steering Group (SG). He stated that the SG's were in general set up to guide the running of the project and to provide guidance on difficult or potentially contentious issues. The Mayisha SG would have a mainly advisory role. SG meeting would be held on a quarterly basis. Other members added the SG could have additional roles, especially in providing increased visibility and communication with community groups.

## **4. Overview of the study**

OD presented a background and rationale for the Mayisha project. He stressed the need for evidence based strategies to inform HIV prevention programmes. KF discussed the importance of community participation and having a model which involved at every aspect, the African community groups. The model of community participation to be implemented in the MAYISHA study was presented and discussed.

The issue regarding which African groups to include was mentioned by JL and CO. It was noted that African groups within the district are changing constantly and with the now increasing numbers of Tanzanian and Malawian groups, perhaps these should also be included in the study's remit. KF and OD agreed the need to be responsive to demographic and epidemiological trends, but as these communities were small and did not have many established structures, then it may be difficult to work with them. Agreed that:

- Smaller groups can be targeted in the qualitative (questionnaire) phase which will be more inclusive.
- Many of the smaller African communities will be developed around existing communities and will be picked up in the social mapping phase
- CO suggested that Tanzanians could also be employed as sessional workers to obtain responses from this community

A wide range of issues were then discussed by the group including:

- CO and JL stressed the importance of paying sessional workers for their participation
- Whether or not to pay key workers as some community groups were voluntary and key workers would not be salaried or receiving any financial support.
- Group decided that perhaps best to reimburse such key workers for travel, food and child care costs.
- The possibility of paying the organisation was discussed, however the SG felt that few would have sufficient supporting structures. Suggestion made by CO to discuss the payment issue at the African Forum.

## **5. Social Mapping exercise**

Aims, objectives and methodology introduced by MC. Social mapping currently underway. JL suggested that social mapping should attempt to go a bit deeper than geographic location and wondered about the possibility of exploring the distribution of cultural/ behavioural practices as well. Attentions should also be paid to other community structures e.g. Initiation ceremonies, weddings which would not necessarily be found under social venues.

## **6. Validation of the social mapping exercise**

KF and MC discussed the importance of validating the results of the social mapping exercise. This could be done through:

- Discussions with the key workers
- Consultation days

## **7. Project Launch**

Set for the 14th September initially. JL suggested postponing as to avoid conflicting with other local events.

## **8. Next Meeting**

Set for 6th November 1998. Fourth Floor Seminar Room. Mortimer Market Centre.

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Dr. Kevin Fenton



## **Summary Results of the social mapping (still in progress)**

This is a summary report of the social mapping phase which is due to be completed within the coming few weeks. The report is structured to cover the aims and objectives of the social mapping phase and the methods used to date. We have also highlighted some of the constraints faced by the research team during this phase. Mapping results for each community are represented on separate maps and are to be used as part of the consultation exercise.

The five African communities who were identified by the Camden and Islington Health Authority as needing intensive HIV prevention (because of high HIV and STI risks) were the Congolese, Kenyans, Ugandans, Zambians and Zimbabweans ('Big 5'). However, the Mayisha team is aware that since its publication, the Health Promotion unit has since identified other communities (e.g. the Malawians and Tanzanians) as also needing intensive HIV prevention work. Because of funding and time constraints, within the Mayisha study (contracted to study only the Big 5), we hope that since the Mayisha project is a 'pilot project', future work, will target other African communities.

### **Aims of the social mapping phase**

The overall aim of the social mapping exercise is to provide an understanding of the social patterns, interrelationships and opportunities for sexual health promotion and research within the 5 study African communities in Camden and Islington plus the surrounding boroughs.

### **Objectives of the social mapping phase**

1. To map African organisations/community groups offering sexual health promotion in Camden and Islington
2. To determine the characteristics of these organisations and community groups in terms of sexual health promotion methods used, the target communities and the geographical locations of individuals accessing sexual health services.
3. To map out the geographical locations of these organisations as this is also important in relation to sexual health provision for Camden and Islington African Communities who may wish to access sexual health services.
4. Further, the social mapping phase sought to map a range of venues (social, religious, educational, economic), the geographical location of these social venues, and the characteristics of the venues (i.e. the pull factors) and the demographic characteristics of the attendees.
5. We also sought to establish a framework for sexual health promotion in these range of social venues and using a variety of research methods, establish the most appropriate methods of sexual health promotion (as defined by the attendees and the management in such venues), so as to make these methods as reflective of community needs as possible.
6. Last, but not least, we sought to understand the possibility of conducting research in the identified social venues.
7. Groups/communities do not exist in isolation and as such we hope to understand the interrelationships between the 5 communities, but with the overall 'enveloping' theme of evaluating the process of interaction between communities, community organisations and the research process.

**Methods used:**

To carry out the outlined aim and the objectives, a range of interrelated methods have been used. All are based on the notion of community participation and involvement. The idea of involving the community is based on the need to ensure that the outputs of the study (models of risk behaviours within the 5 communities) are reflective of community life and that prevention strategies can be translated and implemented within the everyday life of the community. Fig.1 captures the methods used to date; arching between the community and the research institution (a process that is continuously evaluated throughout the study) - making the Mayisha Study a community based. The inner circle depicts the methods used, but with the actual implementation of the methods in community settings.

**Constraints of the social mapping phase**

1. Funding: The Mayisha steering group have been keen to have the Malawians and the Tanzanians included in the study. Interesting but need to be evaluated given the funding and time constraints.
2. Following point 1 - it was at times difficult to visit all the venues in particular those outside Camden and Islington to get an insight into social life in these venues so as to meet the aims and objectives of the Mayisha Social Mapping phase.
3. Sample representation: Some communities have limited sexual health facilities and at times difficult to get members of those 'hidden communities' to be part of the Mayisha team.



# The MAYISHA Study

Taking care of our lifestyles

## Quota Controls for recruitment

Category		Male (60)	Female (60)	Total
Age (120)	16-24	□□□□□□□□□□□□□□□□	□□□□□□□□□□□□□□□□	30
	25-34	□□□□□□□□□□□□□□□□	□□□□□□□□□□□□□□□□	30
	35-45	□□□□□□□□□□□□□□□□	□□□□□□□□□□□□□□□□	30
	over 45	□□□□□□□□□□□□□□□□	□□□□□□□□□□□□□□□□	30
Formal venues (44)	University	□□□□□□□□	□□□□□□□□	14
	Churches	□□□□□□□□	□□□□□□□□	14
	Embassies	□□□□□□□□□□	□□□□□□□□□□	20
Informal venues (76)	Bars/ Clubs/ Concerts Community Events	□□□□□□□□□□□□□□□□ □□□□□□□□□□□□□□□□	□□□□□□□□□□□□□□□□ □□□□□□□□□□□□□□□□	60
	Hair saloons/ Barbers	□□□□□□□□□□	□□□□□□□□□□	16
Ethnicity	Born in or migrated to UK before 10 yrs	□□□□□□□□□□□□□□□□	□□□□□□□□□□□□□□□□	30
	Lived in Africa between 10- 16 years old	□□□□□□□□□□□□□□□□ □□□□□□□□□□□□□□□□ □□□□□□□□□□□□□□□□	□□□□□□□□□□□□□□□□ □□□□□□□□□□□□□□□□ □□□□□□□□□□□□□□□□	90

## **AVERT Project Outline**

16 July 1997

### **HIV Prevention in London's African Communities: The Empirical Assessment of Current Knowledge, Attitudes and Sexual Behaviour.**

#### **Investigators**

**David Miller**, PhD. DipClinPsychol.

**Oliver Davidson**, PhD. DipClinPsychol.

**Kevin Fenton**, MBBS(Hons), MSc. Dip GUM

## **1. BACKGROUND AND RATIONALE**

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Global trends in the HIV/AIDS pandemic indicate that of the 7.7 million cumulative cases of AIDS in the world by mid-1996, 77% were in Africa and assumed to have been transmitted through heterosexual contact<sup>1</sup>.

Recent data regarding HIV in the UK indicate that 32% of all new reported cases of HIV are assumed to have occurred through heterosexual transmission<sup>2</sup>, compared to 2% in 1985, suggesting that HIV in the UK is beginning to mirror the heterosexual pattern developing world-wide. Indeed, predictions over the next four years suggest that although there will be a 15% increase in the prevalence of AIDS cases in the UK, resulting in over 2000 new cases of AIDS between 1995 and 1999, such an increase will occur despite a predicted 7% fall in the number of cases among gay and bisexual men. The continuing increase is due to a predicted 30% rise in the number of cases exposed through heterosexual intercourse.

When looking closer at the exposure risks within the heterosexual population, it has been reported that of the 3469 heterosexually transmitted HIV infections reported in England and Wales to the end of 1994, 79% were from exposure abroad (n = 2733), with the remaining 21% having been exposed to HIV positive partners within the UK itself<sup>3</sup>. Although accurate data is not available to identify the exact country and ethnicity of those individuals who contracted the disease abroad, it has been argued that a significant number are from Africa. Similarly, given that over 75% of the prevalent AIDS cases in England and Wales in September 1995 were within the North and South Thames regions, and given that over three quarters of the UK African population live within the Greater London area, some authorities have argued that the **second largest social group most affected by HIV/AIDS in the UK is**

**made up of people from African communities** having recently immigrated to and living in London<sup>4</sup>.

There has been extensive development of HIV prevention strategies for gay and bisexual men, both here and in the US. Such strategies have been associated with the empirical collection of baseline and process monitoring data within the gay communities (e.g. SIGMA research in the UK), documenting individual and sub-group HIV knowledge, attitudes and sexual behaviour. This has enabled the development of evidence-based information, skills training and peer education strategies that can accurately target those people, attitudes and behaviour most at risk<sup>5 6</sup>, with corresponding reductions in the rate of new HIV infection within these communities. Such work has been expensive on resources and politically sensitive, but can now be held up as the “gold standard”. All were originally derived from empirically developed attitude and behaviour change theories in social psychology (e.g., Theory of Reasoned Action)<sup>7</sup>, which attempt to define and measure psychological predictors of behaviour. Such modelling has been applied to a range of health related behaviours (e.g., Health Belief Model)<sup>8</sup>, and more recently to sexual behaviour change in the context of HIV (e.g., AIDS Risk Reduction Model)<sup>9</sup>.

When reviewing the behavioural HIV prevention strategies in heterosexual populations, there appears to have been an increasing number of published studies assessing the attitudes of African students and commercial sex workers towards HIV disease and condom use in Africa, and evaluating the effectiveness of related educational and sexual health service prevention strategies<sup>10,11</sup>. In the US, there has also been extensive evaluation of sexual attitude and sexual behaviour change strategies that focus on high risk groups within African-American and their contemporaries in African countries<sup>12</sup>.

Unfortunately, it appears that there has been no thorough empirical evaluation of the prevention activities applied to African communities living outside of the African continent. There are a growing number of reports looking at qualitative and epidemiological aspects of such concerns, both here<sup>13,14</sup> and overseas<sup>15</sup>. There has however, to the best of our knowledge, been no reports of quantitative, empirical research on HIV prevention strategies within the African communities residing here in the UK.

## **LOCAL DEMOGRAPHY**

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Camden and Islington Health Authority is coterminous with the two London boroughs. It is situated in London's inner-city and has a resident population of approximately 350,000. It has a sizeable community of over 90,000 ethnic minority residents comprising 25% of the local population. The largest non-white ethnic group are Black Caribbean's, followed by Black Africans and Bangladeshi.

According to the 1991 Census, there are over 10,000 Black Africans resident within the district. Approximately a third were born in the UK. The largest Black African population in Camden was recorded in the Kings Cross ward and the smallest ward total was Hampstead Town. In Islington Borough, the Islington neighbourhood (Talington ward) recorded the highest numbers of Black Africans with the Angel neighbourhood (St Mary and St Peters wards) containing the least. Among district residents born in Commonwealth Africa, the largest populations are from Nigeria

(2,314) followed by Ghana (1,217), South Africa (538), Uganda (438), and Kenya (452).

There are a number of African community organisations which currently work within the district. They represent a wide variety of communities and have already established links for sexual health promotion and educational activities.

## 2. AIMS AND OBJECTIVES

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This project aims to assess the knowledge attitudes and behaviours regarding HIV and STD transmission within high risk sub-groups of London's African communities.

Specific objectives are:

1. To identify and establish collaborative research links with community based organisations working with the high risk African communities in London.
2. To describe the social and geographic mapping of these communities within Camden and Islington alongside the current sexual health promotion activities aimed at these communities
3. To undertake a needs assessment among identified communities involving the quantification of knowledge and attitudes towards HIV and STDs and the modelling of risk behaviour.
4. To determine the feasibility of establishing partnerships between researchers and community organisations working in sexual health.

## 3. METHODOLOGY

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### Study Setting

The project will be targeted within the London Boroughs of Camden and Islington, and will be based at the Archway Sexual Health Clinic (Camden & Islington Community Health Services NHS Trust) in association with the Mortimer Market Centre.

### Study design

#### A. Establishing liaison and research links

Statutory, provider and community organisations currently working with communities from *Uganda, Kenya, Zimbabwe, Zaire and Zambia* will form a part of the initial research collaboration. These communities have been selected as they have been identified as needing **intensive levels** of HIV prevention support by Camden and Islington Health Authority <sup>17</sup> in their African Communities HIV Prevention Strategy. This prioritisation is based on communities degree of risk (for HIV and STD's), equity, opportunities for prevention activity and local demography.



To date we have identified a number of organisations working with these communities including: The African Communities Team of the Health Promotion Department (Camden & Islington Community Health Services NHS Trust), both the Islington Council and Camden Council HIV Services, and local community organisations representing relevant African communities (e.g. Uganda Community Relief Association, Islington Zairian Refugee Group, Akina Mama wa Afrika, Islington African Project, London Black Women's Health Action Project, Africare, and the Ugandan AIDS Action Fund). Other organisations in this field will be identified and contacted through this network.

The establishment of research links will involve many steps:

1. Identifying key workers within these groups who will play a key role in developing the research protocol.
2. Key workers to provide advice on research methodology, questionnaire design, social mapping and description of current interventions, distribution of questionnaires, identification of study subjects, evaluation of the intervention and dissemination of research results.
3. The formal links established with the community organisations will also help to focus attention on future research priorities.

## **B. Social and Geographic mapping and identification of sexual health intervention programmes**

### ***Local Demography***

Obtaining better information on the local demography of the study communities (*Uganda, Kenya, Zimbabwe, Zaire and Zambia*) is essential in undertaking social mapping and in identifying areas where the survey may be undertaken and where interventions may be best delivered within the community setting. Resources at the London Resource Centre will be able to provide census based local demographic data on these communities.

### ***Social mapping***

Ethnographic study through social mapping will enable us to describe the variety of venues (social, educational and religious) currently accessed by members of the study communities. Social mapping will also provide information concerning points of contact for surveying and health interventions. It is proposed that the community groups will play a key role in this phase of the study.

### ***Sexual health interventions and resources***

It is also important to determine and describe the sexual health promotion interventions and resources currently being delivered to study communities. The Camden and Islington Health Promotion Service has already undertaken such an evaluation and this project will seek to update this information.

## **C. Survey of study communities. Needs Assessment and quantification of risk**

### ***Groundwork***

A research assistant will be employed who has proven field experience in the areas of HIV prevention and/or care, and in research within black and ethnic minority populations. They will hold an office at the Archway Sexual Health Clinic, and be responsible to Dr David Miller at the Mortimer Market Centre.

The researchers will contact and discuss the study with relevant African communities within the Camden and Islington area. Questionnaires will be administered to a sample of individuals from the target communities, stratifying for age, gender, and length of residency in the UK (see Section 3.1, below).

### ***Questionnaire development***

To be undertaken in collaboration with Health Promotion and in consultation with the key African community groups. Key measures include HIV/ STD knowledge, risk behaviour, current and preferred sources of sexual health information, perceptions of risk and utilisation of services. Two questionnaires will be used. A short questionnaire for self completion will be distributed to all respondents. All will also be asked to complete a longer more detailed questionnaire for which a small incentive will be given.

### ***Study Design***

#### ***Preliminary Work***

In general, the key considerations which must be taken into consideration when undertaking face-to-face interviews among groups which are difficult to identify and contact include:

1. Recruiting able fieldworkers: Training will be provided to community workers on the methodologies for distributing questionnaires within a variety of settings.
2. Matching interviewer and respondent with regard to ethnicity and sex

#### ***Sampling methods***

We realise that identifying members of the study communities may be difficult due to their small numbers and wide spatial distribution throughout the borough. Random sampling in the community, although ideal, would not be cost effective. Other sampling methods: e.g. name spotting, snow balling, or through community organisations will have their inherent biases. Nevertheless, it may be necessary to use a combination of these strategies in order to obtain even preliminary data where none currently exists.

As such, a convenience sampling method will be used among the study communities identified at social venues, at health education events and through snowballing and networking. It is envisioned that community group workers will play the key role in sampling and distribution of questionnaires at these sites. All individuals from the study communities aged between 18 and 45 years will be asked to complete the questionnaire. To overcome problems with translation, where appropriate, the short questionnaires will be translated into appropriate languages by the community teams. To overcome problems with literacy, community workers may offer to

administer the questionnaires with respondents at the time of sampling or later at a mutually arranged time.

#### Sample size.

The size of the sample reflects the need to ensure that sufficient data is collected from each community group in order to identify clinically important differences between them. However, this must be balanced with the local demography and the sampling opportunities available for each group. A minimum of 100 respondents will be needed in each group to enable us to obtain robust data from the surveyed communities and allow cross community comparisons.

#### Data Analysis

Data analysis will be undertaken by the study researcher with support from the principal investigators and statisticians based at the Department of STDs UCL Medical School. Standard statistical methods used in the analysis of cross sectional surveys will be used. The distribution of knowledge, attitudes and behaviours which influence HIV and STD transmission among the different study groups will be assessed.

### **D. Study Evaluation**

A very important part of our study objectives is to explore the feasibility of undertaking collaborative research with community groups, in particular those working with the study African communities. In order to assess this we will be undertaking a qualitative evaluation of the *process* of community liaison and collaboration. This will include:

1. Semi structured interviews with researchers, key community workers and randomly selected members of community groups who participated in the study.
2. Documentation through diary keeping of the number and types of communities groups involved, difficulties encountered, keenness to participate in research activity.
3. Focus group discussions with researchers and community groups about the project and the liaison established.

## 4. EXPECTED OUTCOMES

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- Information on the demographic and social mapping of five African communities alongside information on local sexual health promotion initiatives targeted at these communities.
- Base line data on the distribution of the following measures in the respective communities:
  1. HIV awareness, and perceived risks
  2. Influential persons for sexual health promotion
  3. Utilisation and access of sexual health services
  4. Ideal settings for HIV health promotion
  5. Providing indicators which can be used to develop a model to predict sexual behaviour change among different African communities
- An evaluation of the feasibility of community partnership in sexual health research.

## 5. STUDY TIMETABLE

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### Month 1 - 6

- Research Assistant recruitment and orientation
- Study design fully developed
- African community organisations contacted, informed and engaged
- **Meeting with AVERT at end of 6 months** - review study design in view of agreed study aims, review pilot tools and procedures

### Month 7-18

- Piloting of tools in each of the major population groups studied
- Distribution of questionnaires
- Interviews with participants
- Data collection and entry continuous
- Analysis of subgroups
- **Meeting with AVERT at end of 12 months** - to review implementation and agree necessary refinements to methodology. Year 1 interim report to AVERT.
- **Meeting with AVERT at end of data collection (18 months)** to review
  - raw data obtained
  - study analysis frame and aims
  - limitations resulting from implementation and data gathering
  - the nature and audiences of final study reports

### Month 19 - 21

- Full data analysis
- Final report(s) written

### Month 22 - 24

- **Meeting with AVERT to plan dissemination framework**
- Report(s) presented, Papers written, Press release
- Dissemination back to study groups
- Seminar(s)

## 6. REFERENCES

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Task	MONTHS (Project began 15/4/98)																							
	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	
<b>PREPARATORY WORK AND SOCIAL MAPPING</b>																								
Ethics Ctte, orientation, etc	•	•																						
Literature Review	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•						
Developing strategies for the social mapping exercise		•																						
Social mapping			•	•	•																			
Social Mapping Report					•	•																		
Position paper						•																		
Recruitment of key workers				•																				
Focus group with key workers					•																			
Training of key workers					•	•	•																	
<b>QUANTITATIVE EVALUATION</b>																								
Development of questionnaire					•	•	•																	
Pilot questionnaire							•																	
Analysis and review of pilot								•																
Recruitment to main evaluation									•															
Data entry										•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Data analysis																								
Report writing																								
<b>QUALITATIVE EVALUATION</b>																								
Focus groups with key workers																		•						
Focus groups with community groups																		•						
Focus groups with selected venues																		•	•					
Focus groups with community members																		•	•					
Report writing																			•	•	•	•	•	
Workshop with providers																			•	•	•	•	•	
Final report																			•	•	•	•	•	
Dissemination																				•	•	•	•	



The MAYISHA Study  
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## Key workers: Working guidelines

### ***What is a Key worker?***

A key worker is a person working with the Mayisha team, offering advice and guidance on the needs of the community which they represent. Ideally, key workers should have a Sexual health promotion remit so as to offer guidance to the Mayisha team on the sexual health needs of their community. Each of the 5 communities in the study (i.e. Zambians, Zimbabweans, Ugandans, Kenyans and Congolese) will have two key workers involved with the Mayisha Project. Although working in the Sexual health remit, they will be offered relevant training in research methods so as to equip them with relevant information on research methods which can be implemented within their communities. Also the key workers will offer advice on methods most appropriate for their communities.

### ***How much time will the Mayisha Project take from the Key workers?***

The precise number of hours that key workers will be directly involved with the Mayisha project will vary according to the stage of the project and the needs of each community. It is however envisaged that on average one afternoon every 8 weeks will be expected. However, these times are negotiable depending on the needs of the key workers, their community as well as the expectations from the organisations or community groups which they represent.

### ***What payment is available to the key workers?***

In addition to the training, Key workers will be awarded certificates in Research methods. Also, travel expenses will be paid plus any expenses incurred in carrying out the Projects work. Payment will be made on the production of receipts.

### ***Can Key workers work as Sessional workers?***

Key workers can work as sessional workers but need to inform and discuss this with the Mayisha link person (Martha). Like all sessional workers, relevant time sheets need to be completed accordingly.

### ***Can key workers access supervision?***

If key workers feel they need support regarding their work with Mayisha, they can call Martha, Kevin or Oliver who are only too happy to meet with the Key workers and offer support as need arises. Remember we are all part of a team!

# THE MAYISHA STUDY: PROJECT LAUNCH

*Monday, 16th November 1998: Duncan Catteral Room, Mortimer Market*

## PROGRAMME

**Chaired by Joshua Odongo: Health Promotion Advisor (African Communities)  
ELCHA**

*Programme starts at 12.20pm with Lunch*

<b>Time</b>	<b>Speaker</b>	
<b>1.30-1.35pm</b>	The Chair	Opening remarks from the Chair
<b>1.35-2.00pm</b>	PERFORMANCE	MBIRA MUSIC WITH SPIRIT TALK
<b>2.00-2.10pm</b>	Joan Chakaodza	HIV prevention among Africans in the next millennium: The way forward
<b>2.15-2.25pm</b>	Oliver Davidson and Caroline Ndofor-tah	Rationale for evidence based practice; the purchaser-provider relationship in HIV Prevention
<b>2.30-2.45pm</b>	Pastor Pam Herbert	Sexual Health and the Church

***2.45 -3.15pm  
TEA BREAK***

***SPECIAL DEDICATION TO THE MAYISHA STUDY WITH BLACK SPEAR  
WHO ARE CURRENTLY ON TOUR IN THE UK  
FOLLOWED BY SPIRIT TALK***

<b>3.15-3.30pm</b>	Kevin Fenton	The Mayisha Study
<b>3.35-3.45pm</b>	Anabel Kanabus	Comments from the funding agency
<b>3.50-4.00pm</b>	Juliet Lubega	The relevance of the Mayisha study to HIV prevention
<b>4.05-4.15pm</b>	Martha Mudari Chinouya	Mayisha project co-ordinator
<b>4.20-4.30pm</b>	Joshua Odongo	Closure



# **The evaluation of the model of community participation in the Mayisha study**

Proposal developed for  
UCL Medical School and Camden & Islington  
Community Health Services NHS Trust

December 1999

Mark Bitel



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## **1 Introduction to the study**

The Mayisha study is a community-based survey of sexual attitudes and lifestyles among five high-risk African communities (Congolese, Kenyan, Ugandan, Zimbabwean, and Zambian) within inner London.

The project was established in May 1998 with funding from AVERT. The term *Mayisha* is the Swahili word for *lifestyles*. The project name was selected by the local African communities following preliminary consultations.

The project aims to assess the knowledge, attitudes and behaviours related to HIV and STD transmission, through community involvement and participation. The four objectives of the collaborative project were to:

- determine the feasibility of establishing collaborative partnerships with local communities through the community-based organisations (CBOs)
- map the social and geographic distribution of the target communities using rapid ethnographic techniques
- undertake a quantitative evaluation of knowledge, attitudes and practices related to sexually transmitted infections including HIV
- evaluate the process of community participation in sexual behaviour research

This proposal represents the fourth objective and has been prepared at the request of Dr. Kevin Fenton, Department of Sexually Transmitted Diseases, Royal Free and University College Medical School, and Dr. Oliver Davidson, HIV/GUM Psychology Services and Honorary Senior Lecturer (UCL), Camden and Islington Community Health Services NHS Trust.

The evaluation will be conducted on behalf of Camden and Islington Community Health Services NHS Trust (from hereto referred to as 'the client').

## **2 Aim of the evaluation**

The aim of the evaluation is to independently assess the process of community participation and engagement, as well as assessing any benefits to the communities as a result of their participation.

## **3 Evaluation methodology**

3.1 The evaluation would be conducted using a variety of methods, including:

- literature review
- key stakeholder interviews
- key informant interviews
- focus groups

3.2 The Mayisha project team have conducted a thorough literature review, which will be drawn upon for the evaluation. It will also be supplemented with research on community participation and engagement in research. The Mayisha project team will also share any information they have on the literature on social capital, community participation and engagement in research.

3.3 Key stakeholder interviews will be conducted with:

- The Mayisha research team: Kevin Fenton, Martha Mudari and Oliver Davidson
- Juliet Lubega, Camden and Islington Health Promotion
- Suzannah Jahar, Inner London HIV Health Commissioners Group, African sub-group chair
- Charles Ndoko, African Communities sub-group
- Jamie Lawrence, AVERT

3.4 Key informant interviews will be conducted with:

- 10 key workers from local African CBOs (two per nation-state group)

3.5 To conduct 2 focus groups with the sessional workers from the CBOs who conducted some of the interviewing. The sessional workers will be paid £20 for their participation in the research, as well as travel expenses. Child care expenses will also be available upon negotiation with the research team.

3.6 A steering group would be appointed from within the larger Mayisha study steering group to meet three times during the evaluation:

- prior to commencement of the evaluation (to clarify evaluation brief, agree themes to be explored during interviews and focus groups)
- mid-way through the evaluation for a progress report and discussion and resolution of any problems or difficulties
- towards the end of the evaluation in order to comment on the draft report

## **4 Confidentiality**

4.1 Participants in the research will be assured absolute confidentiality in the research. In circumstances where their views may indicate their

identity and therefore having the possibility of infringing their confidentiality, they will be informed in advance of the interview and asked for their informed consent if it is necessary to disclose any data that might identify them.

- 4.2 The research team will abide by professional research ethics and will not discuss material information outside the context of the research process.

## 5 Timetable

- 5.1 Preparations for the evaluation will begin in December 1999 and will be completed by 14<sup>th</sup> April 2000.

- 5.2 A more detailed evaluation timetable is shown below:

Month	Activity	No. of days
December 1999	<ul style="list-style-type: none"> <li>• preparation and first steering group</li> <li>• brief literature review</li> </ul>	½ day (MB) 1½ days (MB)
January 2000	<ul style="list-style-type: none"> <li>• begin key stakeholder interviews</li> <li>• begin key informant interviews</li> </ul>	2 days (MB) 3 days (SK)
February 2000	<ul style="list-style-type: none"> <li>• complete key stakeholder interviews</li> <li>• complete key informant interviews</li> <li>• conduct focus groups</li> <li>• second steering group meets</li> </ul>	1 day (MB) 2 days (SK) 1 day (MB) 1 day (SK) ½ day (MB)
March 2000	<ul style="list-style-type: none"> <li>• analysis of research data</li> <li>• complete first draft report</li> <li>• final steering group meets</li> </ul>	3 days (MB) 4 days (MB) ½ day (MB)
April 2000	<ul style="list-style-type: none"> <li>• final report due</li> </ul>	1 day (MB)

## 6 Joint working

- 6.1 It is expected that the Mayisha Study team and *Partners in evaluation*

team will work collaboratively on practical tasks such as:

- access to literature reviews conducted
- verification of interview schedules
- organising the logistics of the focus groups

## **7 Ownership of data and reports**

7.1 The client and its representatives will have sole control and ownership of the data and the reports once the evaluation has been completed, with the exception of:

- transcripts of key stakeholders
- transcripts of key informants

7.2 It is envisaged that all parties will agree to share and disseminate the work as widely as possible, and to collaborate on writing articles for peer review journals and other appropriate fora.

## **8 Consultants**

8.1 The lead evaluator will be Mark Bitel. Mark has a depth of experience in working with HIV and African Communities. In this respect, Mark is currently working with Blackliners and worked with Merton Sutton and Wandsworth Health Authority between 1997 and 1999 to evaluate innovative HIV prevention initiatives developed by African CBOs. Mark has an MA in Sociology, an MSc in Research and evaluation, and an MPS in Counselling and ethics. He is also Honorary Secretary of the UK Evaluation Society.

8.2 The research assistant will be Sophie Kafeero. Sophie has held a variety of front-line positions in both mainstream and community-based organisations, and has a wealth of experience to draw upon in increasing participation and uptake by the African communities in HIV services. Sophie has an MA in Community Care.

## **9 Costings**

9.1 The full cost of the evaluation will be £6700. This includes the evaluators' fees and expenses, as well as provision to cover the participants' focus group incentives and expenses. A full breakdown of costs is shown over page.

9.2 The client will be charged the actual travel costs up to the maximum of the amount shown in the costings.

9.3 The focus group costs are estimates only. The client will be charged the actual focus group costs.

9.3 Itemised breakdown of evaluation costings:

Lead evaluator time (15 days @ £325 per day)	£4875.00
Research assistant (6 days @ £200 per day)	£1200.00
Travel costs	£ 125.00
Focus group incentives and participants' costs	£ 500.00
Total	£6700.00

## **10 Contract**

10.1 Once formally accepted in writing by the client, this proposal will form the basis of the contract and the work will commence.



# Certificate of Achievement

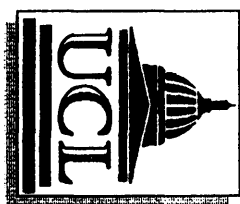
*This certifies that*

*Mary Mwatsama*

*has attended the*

*MAYISHA RESEARCH SKILLS COURSE*

*at the Mortimer Market Centre, London  
1999*





## APPENDIX 9

### MAYISHA STUDY: EXAMPLES OF STUDY OUTPUTS



MAYISHA

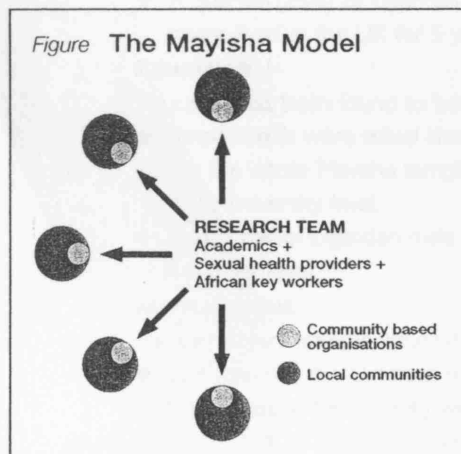
## The Mayisha Project: sexual knowledge, practices and attitudes amongst the Ugandan sample

### Introduction

The Mayisha Study was established in 1997 to assess whether African researchers (key workers and sessional workers) employed in African community based organisations (CBO) could be actively involved in undertaking research on sexual attitudes and lifestyles within their own communities. The study population included Ugandans as well as other African communities resident in the London Borough of Camden and Islington or who were studying, visiting, accessing services, employed or socialising in the borough.

The Mayisha Study engaged communities in a number of ways, but chiefly by creating an opportunity for researchers and health care providers to work together with local African sexual health CBOs. Nominated CBO representatives working with Ugandan communities were invited to join the Mayisha research team as community researchers (figure). After receiving research training, key and sessional workers were then involved in a variety of research activities including questionnaire design and data collection.

Figure The Mayisha Model



This report is based on the study findings that specifically relate to the Ugandan respondents in the survey. Data from the whole Mayisha sample is drawn upon for comparative purposes.

The Ugandan respondents were recruited by Ugandan researchers in a range of social venues including churches, universities, bars and clubs, baby showers, kitchen parties, hair salons/barber shops, garages, and annual community events and football matches. All respondents were asked to complete a short, confidential questionnaire, which asked questions about their background, attitudes towards HIV/AIDS, safer sex, and sexual lifestyles.



Camden and Islington  
Community Health Services NHS Trust



## Key Points about the Ugandan Population

### Demography of Ugandans in the UK (based on the 1991 census)<sup>1</sup>

- ◆ The Ugandan population is culturally diverse with different languages and religions
- ◆ Like the majority of the UK-African population, the Ugandan adult population is mainly composed of people aged less than 40 years old, an age profile that suggests that most adult Ugandans are at stages of life in which reproduction and healthy, fulfilling sexual relationships are a priority.
- ◆ Like most UK-Africans, many Ugandans have been educated beyond secondary school level.
- ◆ There are reported high levels of unemployment and sub-standard housing amongst the Ugandan population in the UK.
- ◆ A number of Ugandans, like most UK-black Africans, reside in London.

### Ugandans recruited in the Mayisha study

A total of 748 African respondents (396 males and 352 females) completed the short survey questionnaires, of these 132 were Ugandans (70 males and 62 females).

#### Age

For the total Mayisha sample, male respondents were older than females, over 30% of the men were aged above 35 compared with 25% of women.

- ◆ Male Ugandan respondents were slightly older than their female counterparts, possibly reflecting the age profiling in social venues, with younger women more likely to attend than those older women<sup>2</sup>.

#### Length of stay in the UK

For the whole Mayisha sample, over a third (44%) of the African men and half (50%) the women had lived in the UK for 5 years or less.

- ◆ A quarter (25%) of Ugandan male and over a third (37%) of the female respondents reported having lived in the UK for 5 years or less.

#### Education

Education has been found to be important in shaping people's attitudes towards health<sup>3</sup>.

- ◆ Respondents were asked about their highest level of formal education.
- ◆ For the whole Mayisha sample, slightly more men (55%) than women (48%) had been educated up to university level.
- ◆ Nearly half of Ugandan male (49%) and female (45%) respondents had been educated up to university level.

#### Marital status

For the Mayisha sample, more men (40%) were married than women (28%).

- ◆ Less than half the Ugandan male (39%) and female (27%) respondents were married. Ugandan female respondents (26%) were more likely to be cohabiting than their male counterparts (12%). 33% of Ugandan male and 32% of female respondents were single, whilst 12% of males and 9% of females reported they were in a relationship but not living together.

#### Where was adolescence experienced?

A key characteristic found to influence cultural differences in sexual attitudes and lifestyles is where individuals experienced adolescence<sup>4</sup>.

- ◆ For the whole Mayisha sample, more men (86%) than women (82%) reported living in Africa during this period of their lives.
- ◆ Although most Ugandan respondents had experienced their adolescence in Africa, there were slight gender differences, with more men (85%) than women (80%) reporting.

### **Experience of Sexually Transmitted Infections (STIs)**

When asked, 'have you ever been diagnosed with a sexually transmitted infection (STI) other than HIV?' a majority of the African Mayisha male (71%) and female (79%) respondents reported that they had never been diagnosed with STIs.

- ◆ A third of Ugandan men (33%) and women (24%) reported that they had been previously diagnosed with an STI. Some infections were recently acquired, 11% of the men and women reported they had been previously diagnosed with an STI in the past 5 years.

### **Condom use**

In response to the question, 'did you use a condom in the last intercourse?' more men in the whole Mayisha sample (46%) than women (42%) reported condom use in the last intercourse.

- ◆ Half the Ugandan male (50%) and nearly a third of the female respondents (36%) reported using a condom in their last penetrative sexual act.

### **Use of vaginal drying agents**

The use of vaginal drying agents ('dry sex') was explored in the question 'some people find that using vaginal herbs or grains to tighten the vagina increase sexual enjoyment; have you or your sexual partner(s) ever practised this technique in the UK?'

- ◆ The use of vaginal herbs (or grains) was reported across all African communities and there were no differences between men (15%) and women (14%).
- ◆ Significantly fewer Ugandan men (0.2%) than women (16%) had practiced dry sex with their partners in the UK.
- ◆ Most Ugandans who practised dry sex in the UK did not generally feel at risk of contracting HIV. Married or cohabiting respondents were more likely to practise dry sex.

### **Travel to home country and sexual practices whilst abroad**

Respondents from all African nationalities (both men and women) reported travelling to their home countries within the last five years. The longer communities had settled in the UK, the more likely they were to have travelled to their home countries.

- ◆ Half the Ugandan male (50%) and female (40%) respondents had travelled abroad.
- ◆ Ugandan participants who were married or cohabiting were more likely to have travelled abroad and to have had sexual intercourse with a new partner whilst visiting their home countries.
- ◆ Most (65%) of the Ugandan respondents who had sex abroad did not generally feel at risk of contracting HIV.

### **Feeling some risk of contracting HIV**

Respondents were asked if they felt at some risk of contracting HIV.

- ◆ More than half of all the Mayisha male (64%) and female (60%) participants did not generally consider themselves at risk of contracting HIV.
- ◆ More than half of the Ugandan male (58%) and female (60%) participants did not generally feel at risk of contracting HIV.
- ◆ Younger Ugandan respondents (less than 24 years old) were more likely to perceive themselves as being at risk of contracting HIV than those above 25 years of age.
- ◆ Ugandan respondents who had more sexual partners were more likely to feel at some risk of contracting HIV.

### **Who is the most trusted person to provide sexual health interventions?**

Forty percent of Ugandan respondents reported that they would trust a doctor/nurse or HIV/Genitourinary Medicine worker, a friend (20%), an older family member (16%) or an older respected man (5%) to provide them with sexual health education. Other sources mentioned included an older respected woman or religious leader.



## Discussion

Caution should be taken in generalising these findings to the whole Ugandan population in London, as the participants were recruited in social venues mostly visited by Ugandans who had connections with the London Borough of Camden and Islington. Their attitudes and lifestyles may differ from other Ugandans who chose not to attend these venues or have no connections with the borough. Further, respondents could have been embarrassed by completing questionnaires on private matters (sexual lifestyles) in public social venues, thus biasing the sample to those who were more open to talk about sex.

### Key points

- ◆ Many Ugandan participants did not generally feel at risk of contracting HIV. Despite this, there is clear evidence of high risk behaviours within the community such as dry sex, multiple partners and having sex with new partners whilst abroad.
- ◆ The HIV epidemic has greatly affected African countries including Uganda and there are increased risks of contracting HIV with new sexual partners whilst visiting home countries.
- ◆ More younger Ugandan respondents (less than 25) perceived themselves at some risk of contracting HIV than those aged 25 and above. This could be because younger Ugandan respondents were more likely to be single than married or cohabiting and felt some risk as 'getting to know' new sexual partners increased their likelihood of contracting or transmitting STIs if no safer sex strategies (eg. condoms) were in place.
- ◆ More Ugandan men than women reported using a condom in the last sexual intercourse. The difference between men and women in condom use needs further exploration – who are Ugandan men using condoms with? Could this be because Ugandan male participants were more likely to be married and may not use condoms within marriage? The fewer female participants who reported using a condom in the last sexual encounter may reflect the power difference between men and women in negotiating safer sex strategies.

## Recommendations

- ◆ There is a need for educational models which target attitudinal change related to safer sex and HIV risk.
- ◆ Peer education is recommended for young Ugandan people with training for peer educators.
- ◆ As most respondents would trust doctors/nurses/HIV workers, it is important that these professionals receive appropriate training in the cultural milieu in which these reported sexual behaviours and attitudes occur.

*This report is produced jointly by the Mayisha research team, The London Ecumenical AIDS Trust and The Africa Advocacy Foundation, CBOs providing sexual health promotion to Ugandan communities in London.*

---

### References

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4. Elam G, Fenton K, Johnson A, Nazroo J, and Rithie J. (1999). *Exploring Ethnicity and Sexual Health*. London: Joint Surveys Unit, National Center for Social Research and the Department of Epidemiology, University College.



# **The Mayisha Study**

## **Sexual Attitudes and Lifestyles of Migrant Africans in Inner London**

**Martha Chinouya, Oliver Davidson  
and Kevin Fenton**

on behalf of the  
**MAYISHA Research Team**



...er sculpture: *Travelling Family* by Amos Supun  
...refugee family has walked a great distance to  
...ach the relative safety of a neighbouring land.



Camden & Islington **NHS**  
Community Health Services NHS Trust



**Chinouya, M., Davidson, O. & Fenton, K.**

***Sexual Attitudes and Lifestyles of Migrant  
Africans in inner London***

**November 2000**

**Published by AVERT**

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Tel: 01403-210-202; Fax: 01403-211-001**

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AVERT  
2000**

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## APPENDIX 10

# NATIONAL SURVEY OF SEXUAL ATTITUDES AND LIFESTYLES: STUDY MATERIALS



## APPENDIX A FIELDWORK DOCUMENTS

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CAPi and CASI questionnaire	52
Show cards (male version)	150



National Centre for  
Social Research

Formerly SCPR



National Centre for Social Research  
35 Northampton Square  
London EC1V 0AX  
Telephone: 0171 250 1866

P1873

March/April 2000

Interviewer's name:

Interviewer's number:

Dear Sir/Madam,

**The National Survey of Sexual Attitudes and Lifestyles, 1999/2000  
Funded by the Medical Research Council (MRC)**

This letter is to tell your household a little about the above survey and to request your help. The survey is being carried out by a team of researchers\* from a teaching hospital and a public health institute, which are both part of the University of London, and by the National Centre for Social Research, which is Britain's largest independent social research institute. The survey is funded by the Medical Research Council (MRC).

In 1990 the same team carried out a similar survey providing reliable information on this subject for the first time in Britain. Nearly 19,000 people were interviewed then; the results were published in two books and in many articles in medical and academic journals, as well as being widely reported in the media. The information has proved to be specially useful to doctors, health educationalists and many others concerned with family planning and sexual health services. There is now an urgent need to update and extend the research.

This new survey covers a large sample of addresses, all over Britain, selected at random from the Post Office's central list of addresses. An interviewer from the National Centre for Social Research will call at your address within the next week or so to explain the survey fully and to ask for your co-operation in choosing someone in your household, by random procedure, to take part. If you happen to be busy when the interviewer calls, she or he will be happy to call again at a more convenient time. You will be shown an identity card, with a photograph, which includes the interviewer's name and number. The number appears at the top of this letter so that you can check it when the interviewer calls.

All information given in interviews is treated in confidence and never linked to names or addresses. Although some people, when first approached, feel a little reluctant about taking part, we know from experience that almost everyone finds the interview straightforward and interesting. The questions have been designed to make it as easy as possible to answer. One part is "self-completion" so that the interviewer does not see the answers.

We do hope we can rely on your help. It is a very important study and each individual's views and experiences - whatever they may be - are of equal value in representing the country as a whole. Please do not hesitate to contact us if you have any queries or would like further information.

Yours sincerely

Bob Erens  
Research Director,  
National Centre for Social Research

Kaye Wellings  
LSHTM

Anne Johnson  
RFUC Medical School

\*from a teaching hospital and a public health institute, which are both part of the University of London, and by the National Centre for Social Research, which is Britain's largest independent social research institute. The survey is funded by the Medical Research Council (MRC).



National Centre for  
Social Research

Formerly SCPR



National Centre for Social Research  
35 Northampton Square  
London EC1V 0AX  
Telephone: 020 7250 1866

P2026

April/May 2001

Dear Sir/Madam,

Interviewer's name:

Interviewer's number:

**The National Survey of Sexual Attitudes and Lifestyles 2000/2001  
Funded by the Medical Research Council (MRC)**

This letter is to tell your household about the above survey that is currently being carried out all over country and to ask for your help. The survey is being carried out by a team of researchers from a teach hospital and a public health institute, which are both part of the University of London, and by the *National Centre for Social Research*, Britain's largest independent social research institute. The survey is funded by **Medical Research Council (MRC)**.

In 1990 the same team carried out a similar survey providing reliable information on this subject for the first time in Britain. Nearly 19,000 people were interviewed then; the results were published in two books and many articles in medical and academic journals, as well as being widely reported in the media. This information has proved to be especially useful to doctors, health educationalists and many others concerned with family planning and sexual health services. There is now an urgent need to update and extend research.

This new survey covers a large sample of addresses, all over Britain, selected at random from the Post Office central list of addresses. We are also boosting the numbers of respondents from certain ethnic groups, ensure that a range of people are reliably represented in the data. The interviewer from the *National Centre for Social Research* will explain the survey fully and ask for your co-operation in choosing someone in your household, by random procedure, to take part. If you happen to be busy when the interviewer calls, she or he will be happy to call again at a more convenient time. You will be shown an identity card, with photograph, which includes the interviewer's name and number.

All information given in interviews is treated in confidence and never linked to names or addresses. Although some people, when first approached, feel a little reluctant about taking part, we know from experience that almost everyone finds the interview straightforward and interesting. The questions have been designed to make it as easy as possible to answer. One part is "self-completion" so that the interviewer does not see the answers.

We do hope we can rely on your help. It is a very important study and each individual's views and experiences - whatever they may be - are of equal value in representing the country as a whole. **There is a £10 gift voucher as a token of appreciation for taking part.** Please do not hesitate to contact us if you have any queries or would like further information.

Yours sincerely

Bob Erens  
Research Director,  
*National Centre for Social Research*

Kaye Wellings  
LSHTM

Anne Johnson  
RFUC Medical School

## WHAT ARE YOUR RIGHTS?

This study will depend for its success on the cooperation of the vast majority of people we approach. Nonetheless, it is voluntary: everyone approached has a right to refuse to take part at all or, having agreed, to refuse to answer any question, or to stop the interview at any point. We will respect these rights absolutely. But we urge you to give the survey a fair chance (however reluctant you may feel) as thousands of others have done in our earlier survey. Almost everyone who agreed to take part completed the interview with little or no embarrassment. The interview should not take very much of your time.

You also have the right to absolute confidentiality so your participation will be anonymous: neither your name nor your address will ever be linked to your answers, or be identifiable in what we publish, or passed to anyone outside the research team at the National Centre, or used for any other purpose whatsoever.

## FURTHER INFORMATION

*If you want any further information about any aspect of the study, do not hesitate to ask for it. In the first instance ask the interviewer who will try to answer fully. But if you need further details, 'phone the National Centre for Social Research on 0171 250 1866 and direct your questions to Sally McManus or Bob Erens, or write to the London office at the address below.*

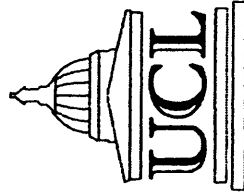
35 Northampton Square, London EC1V 0AX  
100 King's Rd, Brentwood, Essex, CM14 4LX

Tel: 0171 250 1866  
Tel: 0800 783 5890



National Centre for  
Social Research

*Formerly SCPR*



# THE NATIONAL SURVEY OF SEXUAL ATTITUDES AND LIFESTYLES 1999/2000

Funded by the  
Medical Research Council



## WHY STUDY THIS SUBJECT?

In 1990 the first reliable survey of British sexual attitudes and lifestyles was carried out. Nationally, 19,000 people took part in this major survey. The results have been published in two books and many articles in scientific journals. They have been widely used by doctors and health service providers as well as scientists. The study has contributed to understanding the spread of AIDS in Britain and how best to stop further spread. It has also been widely used to help plan other health services and health education programmes.

But the 1990 survey is already out of date. Medical experts are now convinced that we need to carry out a new survey to understand how attitudes and lifestyles have changed. They urgently need up-to-date information to see how far Britain's prevention efforts have been successful. New information is also urgently needed to help planners of services concerned with other sexually transmitted diseases, obstetrics, family planning and health education. To do this, another survey of the general population is needed - among people in all parts of Britain of different ages and from all walks of life.

The new survey is being carried out by the same team of researchers as the 1990 survey and is funded by the Medical Research Council.

Similar surveys have been carried out in many parts of the world including those undertaken by the World Health Organisation. The first (1990) survey is regarded as the most authoritative source of information on the subject in Britain. Its methods and questions have been used by other researchers around the world, so the British survey also has international importance. The new survey will be just as important, for both Britain and other countries.

## HOW DID YOUR ADDRESS COME UP?

To undertake a scientific study of this sort, we need to select people entirely at random. Otherwise there is always a risk of getting biased results. In this case we have selected addresses at random from the Post Office address lists from all parts of Britain. Then, at each address, we have to select one adult, again by random sampling techniques. Having made these two selections we are not permitted to take substitutes - either for an address or for a person. This means that any address which does not produce an interview is, in effect, counted as a failure. And if we get too many failures, the results of the study will not be reliable and could not be used with the confidence that is needed.

## WHO IS INVOLVED IN THE RESEARCH?

Researchers within a hospital (Royal Free and University College Medical School - RFUC), an independent survey research institute (National Centre for Social Research), and a public health research institution (London School of Hygiene and Tropical Medicine - LSHTM) are all involved in the study.

The principal researchers are Professor Anne Johnson and Dr. Kevin Fenton at RFUC, Bob Erens and Julia Field at the National Centre for Social Research, and Kaye Wellings at the LSHTM. Other members of the team are Sally McManus and Christos Korovessis (National Centre) and Angela Taylor and Andrew Copas (UCL).



Formerly SCPR

P1873  
2000

## HELPLINES

There are now many organisations which provide professional and confidential help or advice on a wide range of health and personal problems. The 'phone numbers of some of the main organisations are listed below. Any of them should be able to help or advise you on where to go locally for help or information.

**Family Planning Association** give guidance on where you can seek help for a wide range of issues relating to health, sexual and personal relationships.

England:	0171 837 4044
Northern Ireland:	01232 325488
Wales:	1222 342766
Scotland:	0141 576 5088

**Relate** provide a marriage guidance and counselling service for all aspects of personal relationships, with branches all over the country.

National Headquarters, Rugby: 01788 573241  
London Marriage Guidance: 0171 580 1087

**Women's Health Concern** is a source of advice on any problems concerning women's health, such as abortion, psychosexual problems, sexually transmitted diseases, menopause, etc.)

London: 0181 780 3007 (message gives out regional numbers)

**Rape Crisis Centre** a completely confidential service for rape victims

London helpline: 0171 837 1600  
National: 0345 023 468

### **Samaritans**

London: 0171 734 2800  
National: 0345 909090

**Gay and Lesbian Switchboard** provides telephone help for those seeking advice and information on matters relating to homosexuality.

London: 0171 837 7324  
London Lesbian Line: 0171 251 6911

**British Association for Counselling** provide counselling on psychosexual problems.

National: 01788 578328

**Marie Stopes international**

National: 0845 300 8090 (termination information and advice)

National: 0800 590 390 (male & female sterilisation information)

London: 0171 388 0662 (family planning, screening etc.)

**Brook Advisory Centres** for pregnancy tests, advice, contraception, abortion services and help with emotional and sexual problems for those under 20.

London: 0171 580 2991 (for information about nearest branch)

London: 0800 018 5023 (24 hour emergency helpline)

## APPENDIX 11

# NATIONAL SURVEY OF SEXUAL ATTITUDES AND LIFESTYLES: QUESTIONNAIRE



**RDBoM**

I would like to start by asking you a few questions about health, but may I check first:

In which month and year were you born?

ENTER MONTH AT THIS QUESTION, YEAR AT NEXT QUESTION.

- 1 January  
2 February  
3 March  
4 April  
5 May  
6 June  
7 July  
8 August  
9 September  
10 October  
11 November  
12 December

**RDBoY**

ENTER YEAR OF BIRTH.

Range: 1900..1990

**IF (RDBoY = NONRESPONSE) THEN**

**RAgeGr**

Would you say roughly what age group you are in?

- 1 16 - 17  
2 18 - 18  
3 20 - 24  
4 25 - 34  
5 35 - 44  
9 (Not established: don't use this code)

**ENDIF**

**IF (RDOBY=1954, 1955 OR 1985)**

**RAge**

Can I just check, what was your age last birthday?

Range: 1..97

**ENDIF**

**DAGr.**

Derived age group.

- 1 16 - 17  
2 18 - 19  
3 20 - 24  
4 25 - 34  
5 35 - 44  
9 (Not established: don't use this code)

**RSex**

INTERVIEWER: RECORD WHETHER RESPONDENT IS MALE OR FEMALE.

- 1 Male  
2 Female

**Health**

Now your health. How is your health in general?

Would you say it is ...**READ OUT...**

- 1 ...very good,  
2 ...good,  
3 ...fair,  
4 ...bad,  
5 or very bad?

**Disabil**

Do you have any long-standing illness, disability or infirmity?

By long-standing I mean anything that has troubled you over a period of time, or that is likely to affect you over a period of time?

- 1 Yes  
2 No

**IF (Disabil = Yes) THEN**

**Limit**

Does this limit your activities in any way?

- 1 Yes  
2 No

**ENDIF**

**IllOrAcc**

In the last five years have you had any (other) illness or accident that affected your health for at least 3 months?

- 1 Yes  
2 No

**OutPatYr**

In the last year, that is since (Date a month/year ago), have you attended, as a patient, the casualty or outpatient department of a hospital (apart from straightforward ante- or postnatal visits)?

- 1 Yes  
2 No

**DayPat**

During the last year, that is since (Date a month/year ago), have you been in hospital for treatment as a day patient, that is, admitted to a hospital bed or day ward, but NOT staying overnight?

**EXCLUDE VISITS FOR PREGNANCY.**

- 1 Yes  
2 No

**InPat**

And during the last year, that is since (Date a month/year ago), have you been in hospital as an inpatient, overnight or longer?

**EXCLUDE OVERNIGHT STAYS FOR PREGNANCY.**

- 1 Yes  
2 No

**IF (Rsex = Female) THEN**

**AnteNat**

In the last five years, that is since (Date 5 years ago), have you attended an ante-natal clinic or ante-natal service at a hospital or at your GP's because you were pregnant?

- 1 Yes  
2 No

IF (AnteNat = Yes) THEN

AnteNNo

Was this for one pregnancy or more than one? How many in the last 5 years?

ENTER NUMBER.

Range: 1..8

AnteNYrs

In which year did you start attending the ante-natal clinic or service for *(the first/second/third etc)* pregnancy?

ENTER YEAR.

Range: 1994...2001

ELSEIF (AnteNat = No) THEN

ANBId

As part of care during pregnancy, have you ever had 'booking blood' taken at an antenatal clinic or service or at your GP's? By 'booking blood' we mean the first set of blood tests taken during pregnancy.

1 Yes

2 No

IF (ANBId = Yes) THEN

ANWWh

Have you had 'booking blood' taken at an antenatal clinic or service or at your GP's since

January 1st, 1988?

1 Yes, more than five years ago but since Jan 1st 1988

2 No, before 1988 only

ENDIF

ENDIF

ENDIF

ENDIF

Drink

I am now going to ask you a few questions about drinking alcohol - that is if you drink. Do you ever drink alcohol nowadays, including drinks you brew or make at home?

1 Yes

2 No

IF (Drink = No) THEN

DrinkAny

Could I just check, does that mean you never have an alcoholic drink nowadays, or do you have an alcoholic drink very occasionally, perhaps for medicinal purposes or on special occasions like Christmas and New Year?

1 Very Occasionally

2 Never

ENDIF

IF (Drink = Yes) OR (DrinkAny = Occ) THEN

DrinkOf

CARD A

How often have you had an alcoholic drink of any kind during the last 12 months?

1 Five or more days a week

2 Three or four days a week

3 Once or twice a week

4 Once or twice a month

5 Once or twice in the last 12 months

6 Not at all in the last 12 months

IF DrinkOf IN [Five..OneMth] THEN

ManyAlc

CARD B

This card shows what we mean by one drink.

About how many drinks do you usually have on the days when you have any, apart from parties or special occasions?

1 One or two

2 Three or four

3 Five or six

4 More than six

5 Other answer (SPECIFY AT NEXT QUESTION)

IF (ManyAlc = Other) THEN

XManyAlc

TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

Open type: long verbatim answer

6 Only drink on special occasions/parties

7 Varies too much to say

ENDIF

ENDIF

ENDIF

SmokeNow

Do you ever smoke cigarettes at all nowadays?

1 Yes

2 No

IF (SmokeNow = Yes) THEN

NoSmoke

About how many cigarettes a day do you usually smoke?

ENTER NUMBER PER DAY.

IF RESPONDENT CAN ONLY GIVE RANGE, TAKE THE MID-POINT.

IF RESPONDENT SAYS MORE AT WEEKENDS THAN WEEKDAYS, TAKE WEEKEND NUMBER.

IF LESS THAN ONE A DAY, ENTER 0.

Range: 0..97

**ELSEIF (SmokeNow = No) THEN**  
    **ExSmoke**  
    Did you ever smoke cigarettes regularly, that is, at least one cigarette a day?  
        1     Yes  
        2     No

**ENDIF**

**Weight**  
I would like to ask how much you weigh at present.  
RECORD OR ASK: Do you prefer to give your weight in...  
    1     stones and pounds,  
    2     or, kilograms?  
    3     Weight not known

**IF (Weight = Stones) THEN**  
    **StWeight**  
    RECORD OR ASK: How many STONES?  
    RECORD NUMBER OF STONES.  
    Range: 0..40

**LbWeight**  
RECORD OR ASK: And how many POUNDS?  
RECORD TO NEAREST POUND.  
Range: 0..13

**KgWeight.**  
RECORD OR ASK: About how much do you weigh in kilograms?  
RECORD TO NEAREST KILOGRAM.  
Range: 0..250

**SureWgt**  
Are you fairly sure of your weight or is that an estimate?  
    1     Fairly sure  
    2     Estimate

**IF (DMSex = Female) THEN**  
    **PregNow**  
    I need to check because it affects weight: are you pregnant at present?  
        1     Yes  
        2     No

**ENDIF**

**ENDIF**

**Height**  
Now I would like to ask how tall you are.  
RECORD OR ASK: Do you prefer to give your height in...  
    1     feet and inches,  
    2     or, centimetres?  
    3     Height not known

**5120**

**IF (Height = Feet) THEN**  
    **FtHeight**  
    RECORD OR ASK: How tall are you in FEET?  
    RECORD NUMBER OF FEET.  
    Range: 0..7

**InHeight**  
RECORD OR ASK: And how many INCHES?  
RECORD TO NEAREST INCH.  
Range: 0..11

**CmHeight**  
RECORD OR ASK: About how tall are you in centimetres?  
Range: 0..220

**ENDIF**

**ENDIF**

AnySibs

Now a few questions about you and your family when you were growing up.  
Do you have, or did you have any brothers or sisters, including adopted or half-brothers or sisters, but excluding any step- brothers or sisters?

IF YES, PROBE: Brothers, sisters or both?

CODE ONE ONLY.

- 1 Yes - Brother(s) only
- 2 Yes - Sister(s) only
- 3 Yes - Both
- 4 No, none

IF AnySibs IN [Broth..both] THEN

NoSibs

How many full, half or adopted (*brothers/sisters/brothers and sisters*) do, or did, you have?  
EXCLUDE STEP-SIBLINGS.

EXCLUDE ANY SIBLINGS BORN AFTER RESPONDENT LEFT PARENTAL HOME.

ENTER NUMBER (EXCLUDING RESPONDENT).

Range: 1..20

SibsPos

Were you the oldest or youngest (*or in between*)?

- 1 Oldest
- 2 Youngest
- 3 In between

ENDIF

StepSibs

And do you have, or did you have any step-brothers or sisters?

- 1 Yes
- 2 No

BothMaPa

Did you live more or less continuously with **both** of your **natural** parents at home until you were 16?  
EXPLAIN IF NECESSARY: That is your birth parents.

'YES' TO INCLUDE BOTH PARENTS BUT RESPONDENT AT BOARDING SCHOOL OR AWAY TEMPORARILY.

- 1 Yes
- 2 No

IF (BothMaPa = No) THEN

YNotBoth

Is that because there was ...READ OUT...

- 1 ...a divorce or separation,
- 2 or, a death,
- 3 or, are you adopted,
- 4 or, your parents never lived together,
- 7 or, is there another reason?(IF VOLUNTEERED, SPECIFY AT NEXT QUESTION)

IF (YNotBoth = Other) THEN

XNYNotBoth

51 IF VOLUNTEERED, TYPE IN OTHER ANSWER GIVEN, OTHERWISE TYPE '7' AND <Esc>.

52

5. Parents were abroad
6. In care/fostered/children's home/hostel etc.
7. Lived with grandparent(s)/other relative

8. Left home before age 16

ENDIF

IF (YNotBoth <> Adopt) THEN

MaOrPa

And may I check, after that did you live more or less continuously with your mother or with your father until you were 16?

- 1 Mother
- 2 Father
- 3 Other relative
- 4 Other (in care, fostered, etc)

ENDIF

ENDIF

AnyChild

Do you have, or have you had, any children of your own that you are the natural (*father/mother*) of? Please include any who don't now, or never did, live with you as part of your household.

IF MENTIONED, EXCLUDE MISCARRIAGE/ABORTION/ADOPTED.

- 1 Yes
- 2 No

IF (AnyChild = Yes) THEN

NoChild

How many children have you had?

(INCLUDE STILLBIRTH/DIED)

Range: 1..97

DoBChM

In which month and year was your (*first/next*) child born?

ENTER MONTH AT THIS QUESTION, YEAR AT NEXT QUESTION.

- 1 January
- 2 February
- 3 March
- 4 April
- 5 May
- 6 June
- 7 July
- 8 August
- 9 September
- 10 October
- 11 November
- 12 December

DoBChY

ENTER YEAR.

Range: 1960...2001

IF NOCHILD>1 THEN

SameMF

Do (*both/all*) your children have the same (*mother/father*)?

- 1 Yes: (*both/all*) the same
- 2 No (different)

ENDIF

ENDIF

AdopChild

Do you have any adopted children?

- 1
Yes
- 2
No

StepChild

Do you have any step-children?

- 1
Yes
- 2
No

IF (BothMaPa=Yes) OR (MaOrPa=Mother or Father)) THEN

TalkMaPA

Now I'd like to ask you some questions about when you were growing up and learning about sex. When you were about 14, did you find it easy or difficult to talk to your *(parents/mother/father)* about sexual matters, or didn't you discuss sexual matters with *(them/her/him)* at that age?

- 1
Easy (with one or both)
- 2
Difficult
- 3
Didn't discuss (with either)
- 4
Varied/depended on topic

ENDIF

LearnSex

CARD C

*(Now I'd like to ask you some questions about when you were growing up and learning about sex.)*

When you were growing up, in which of the ways listed on this card did you learn about sexual matters?

EXPLAIN: You can just tell me the code letters.

PROBE: What other ways? CODE ALL THAT APPLY.

- 1
(P) Mother
- 2
(Z) Father
- 3
(X) Brother(s)
- 4
(L) Sister(s)
- 5
(N) Other relative(s)
- 6
(D) Lessons at school
- 7
(J) Friends of about my own age
- 8
(S) First *(girl/friend/boy/friend)* or sexual partner
- 9
(A) A doctor, nurse or clinic
- 10
(K) Television/radio
- 11
(E) Videos
- 12
(G) Books
- 13
(V) Magazines or newspapers
- 14
(Q) Other (SPECIFY AT NEXT QUESTION)
- 15
More than 12 ways

IF Other IN LearnSex THEN

XLernSex

TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

- 16
Lesson/course (i.e. formal teaching)
- 17
Film(s) - i.e. cinema, not TV or video
- 18
Through experience/learn by own experience (general mention); by myself
- 19
Hearing people talk (inc. in pubs; being in a group etc)

ENDIF

IF MORE THAN ONE ANSWER CODED AT LEARNSEX THEN

LernMost

CARD C

From which one of those did you learn most?

- 1
(P) Mother
- 2
(Z) Father
- 3
(X) Brother(s)
- 4
(L) Sister(s)
- 5
(N) Other relative(s)
- 6
(D) Lessons at school
- 7
(J) Friends of about my own age

- 8 (S) First (*girlfriend/boyfriend*) or sexual partner
- 9 (A) A doctor, nurse or clinic
- 10 (K) Television/radio
- 11 (E) Videos
- 12 (G) Books
- 13 (V) Magazines or newspapers
- 14 (Q) Other (SPECIFY AT NEXT QUESTION)
- 15 More than 12 ways

IF LERNMOST = MORE THAN 12 WAYS

MLernMst

CARD C

Which were the main ones you learnt from?

- 1 (P) Mother
- 2 (Z) Father
- 3 (X) Brother(s)
- 4 (L) Sister(s)
- 5 (N) Other relative(s)
- 6 (D) Lessons at school
- 7 (J) Friends of about my own age
- 8 (S) First (*girlfriend/boyfriend*) or sexual partner
- 9 (A) A doctor, nurse or clinic
- 10 (K) Television/radio
- 11 (E) Videos
- 12 (G) Books
- 13 (V) Magazines or newspapers
- 14 (Q) Other (SPECIFY AT NEXT QUESTION)
- 15 More than 12 ways

ENDIF

ENDIF

LearnMor

CARD D

Looking back to the time when you first felt ready to have some sexual experience yourself, is there anything on this list that you NOW feel you ought to have known more about?

IF YES: Which ones?

PROBE: What others? CODE ALL THAT APPLY.

- 1 (A) How girls' bodies develop
- 2 (Q) How boys' bodies develop
- 3 (B) How a baby is born
- 4 (H) Sexual intercourse
- 5 (R) Contraception, birth control
- 6 (L) Homosexuality, lesbianism
- 7 (T) Masturbation
- 8 (K) How to make sex more satisfying
- 9 (S) How to be able to say 'No'
- 10 (M) Sexual feelings, emotions and relationships
- 11 (D) Sexually transmitted diseases (e.g. VD/AIDS/ HIV infection)
- 12 All of them
- 97 Would have liked to know more but can't specify which
- 98 None of these - knew enough
- 99 None - not ready for sexual experience yet

33

WhoLern  
CARD C AGAIN  
How, or from who, would you have liked to learn more about those sexual matters: please choose just one or two from this list?  
CODE UP TO TWO.

- 1 (P) Mother
- 2 (Z) Father
- 3 (X) Brother(s)
- 4 (L) Sister(s)
- 5 (N) Other relative(s)
- 6 (D) Lessons at school
- 7 (J) Friends of about my own age
- 8 (S) First (*girlfriend/boyfriend*) or sexual partner
- 9 (A) A doctor, nurse or clinic
- 10 (K) Television/radio
- 11 (E) Videos
- 12 (G) Books
- 13 (V) Magazines or newspapers
- 14 (Q) Other (SPECIFY AT NEXT QUESTION)

IF Other IN WhoLern THEN

XWhoLern

TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

- 15 None of these

ENDIF

**IntroInt**  
CARD E  
On this card are two questions about your own experience. For each question would you tell me your age at the time, or just say, 'this hasn't ever happened'.  
**PAUSE. TO GIVE RESPONDENT TIME TO READ CARD. DO NOT READ OUT THE QUESTIONS (WHICH ARE ON THE CARD) UNLESS THE RESPONDENT NEEDS HELP.**  
IF RESPONDENT QUERIES MEANING OF B, EXPLAIN: Any kind of experience that you feel is sexual.  
**DO NOT READ A AND B:**  
A - How old were you when you first had sexual intercourse with someone of the opposite sex, or hasn't this happened?  
B - How old were you when you first had any type of experience of a sexual kind - for example, kissing, cuddling, petting - with someone of the opposite sex (or hasn't this happened either)?  
**PRESS <1> AND <Enter> TO CONTINUE.**  
Text: Maximum 1 character

**FirstInt**  
ASK: How about question A?  
ENTER EXACT AGE.  
Not sure of age - PROBE: About how old? CODE 95 AND TYPE IN ESTIMATE AT NEXT QUESTION.  
Hasn't ever happened, CODE 96.  
Refused to answer, CODE 97.  
Range: 0..97

**IF (FirstInt = 95) THEN**  
XFirstInt  
TYPE IN ESTIMATED AGE FOR QUESTION A.  
Range: 0..44

**FirstExp**  
ASK: And how about question B?  
ENTER EXACT AGE  
Not sure of age - PROBE: About how old? CODE 95 AND TYPE IN ESTIMATE AT NEXT QUESTION.  
Hasn't ever happened, CODE 96.  
Refused to answer, CODE 97.  
Range: 0..97

**IF (FirstExp = 95) THEN**  
XFrstExp  
TYPE IN ESTIMATED AGE FOR QUESTION B.  
Range: 0..44

**ENDIF**  
**IF FirstInt or XfirstInt <13 THEN**  
NextInt  
Looking at question A again, has this happened with anybody else since you turned 13?  
1 Yes  
2 Not with anybody else since age 13  
97 Refused to answer  
**51 24**

**IF (NextInt = Yes) THEN**  
NextAge  
How old were you then?  
ENTER EXACT AGE.  
Not sure of age - PROBE: About how old? CODE 95 AND GIVE ESTIMATE AT NEXT QUESTION.  
Refused to answer, CODE 97.  
Range: 13..97

**IF (NextAge = 95) THEN**  
XNextAge  
RECORD ESTIMATED AGE.  
Range: 13..45

**ENDIF**  
**ENDIF**  
**ENDIF**

**IF (DMDebut >= 13) THEN**  
Privacy  
INTERVIEWER CODE YOUR ASSESSMENT OF INTERVIEW CIRCUMSTANCES:  
1 Private enough to ask  
2 Definitely not private enough to ask questions on first experiences (ONLY USE CODE 2 IF ABSOLUTELY NECESSARY)

**IF (Privacy = NotPriv) THEN**  
FEAccept  
HAND SELF-COMPLETION FIRST EXPERIENCES SHEET -(MEN/WOMEN'S) VERSION  
ENTER SERIAL NUMBER ON SHEET.  
You may prefer to answer the next few questions yourself, on this sheet. You just need to tick boxes opposite the answers that apply to you.  
1 Sheet accepted  
2 Prefers to be asked the questions

**IF (FEAccept = Sheet) THEN**  
WhyFE  
WHILE RESPONDENT COMPLETING, TYPE IN YOUR REASON FOR DECIDING ON USE OF SELF-COMPLETION.  
Text: Maximum 60 characters  
1 Another person (regardless of age) in room  
2 Another person in house/within hearing distance, but not in same room

**FEComp**  
**WHEN COMPLETED, TAKE SHEET BACK AND SAY: Thank you. Was there anything you weren't sure about that you'd like to check with me?**  
**EXPLAIN IF NECESSARY.**  
1 Sheet completed - no queries  
2 Sheet completed - after query  
3 Sheet not completed/Refused (STATE WHY AT NEXT QUESTION)  
4 Sheet completed (and entered by interviewer)

IF (FEComp = NotComp) THEN  
XFEComp  
STATE WHY SHEET NOT COMPLETED/REFUSED.  
Text:Maximum 60 characters

ENDIF

ENDIF

ENDIF

Age1Part

The next few questions are about the first time you had sexual intercourse with someone of the opposite sex  
(that is, the first new partner you had sex with after you turned 13).

ENTER AGE.

If not sure of age - PROBE: About how old? CODE 95 AND GIVE AN ESTIMATE AT NEXT

QUESTION.

Never knew partner's age, CODE 97

Can't remember partner's age, CODE 98

Range: 1..98

IF (Age1Part = 95) THEN

XAge1Prt

RECORD ESTIMATED AGE.

Range: 1..97

ENDIF

Part1st

As far as you now know, was it (also) your partner's first time ever, or not?

IF DON'T KNOW, PROBE: Do you think it was (her/his) first time, or not?

1 Yes, first time

2 Think it was first time

3 Think it was not first time

4 No, not first time

BothWill

Would you say that you were both equally willing to have intercourse that first time, or was one of you more willing than the other?

IF ONE MORE WILLING: Who was more willing?

1 Both equally willing

2 Respondent more willing

3 Partner more willing

IF (BothWill = Partner more willing) THEN

PrtWill

Would you say...READ OUT...

1 ...that you were also willing,

2 or, that you had to be persuaded,

3 or, that you were forced?

ENDIF

N

57

AnyPrec

CARD F

Still thinking of that first time you had sexual intercourse, did you or your partner use any form of contraception or take any precautions that first time, or not?

CODE ALL THAT APPLY. PROBE: What else?

1 (A) Condom (Sheath/Durex)

2 (B) The pill

3 (C) Other contraception

4 (D) (partner) withdrew

5 (E) Made sure it was a safe period

6 (F) No precautions by me, don't know about partner

7 (G) No precautions by either of us

JustMet

CARD G

Which one of these descriptions applies best to you and your partner at the time you first had intercourse?

ONE CODE ONLY. IF MORE THAN ONE APPLIES, CODE THE ONE FURTHEST DOWN THE LIST.

1 (N) (MEN ONLY) She was a prostitute

2 (T) We had just met for the first time

3 (X) We had met recently

4 (D) We had known each other for a while, but didn't have a steady relationship at the time

5 (Q) We had a steady relationship at the time

6 (I) We were living together (but not married or engaged)

7 (B) We were engaged to be married

8 (H) We were married at the time

9 (S) Other (SPECIFY AT NEXT QUESTION)

XJustMet

TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

10 Work colleague/employer

11 Knew well/for long time (implied, and other than at work) e.g. very good friends; grew up in same village; part of social circle/social group; class mates etc.

12 Rape/Sexual abuse

RtTime

Looking back now to the first time you had sexual intercourse,

do you think ...READ OUT...

1 ...you should have waited longer before having sex with anyone,

2 or, that you should not have waited so long,

3 or, was it at about the right time?

IF (JustMet < Married) THEN

MainReas

CARD H

Which of these things applied to you at the time?

Please choose the main one that applied at the time.

CODE ONE ONLY.

1 (M) I was curious about what it would be like

2 (C) I was carried away by my feelings

3 (F) Most people in my age group seemed to be doing it

4 (L) It seemed like a natural 'follow on' in the relationship

5 (R) I was a bit drunk at the time

6 (H) I wanted to lose my virginity

7 (D) I was in love

8 (S) Other particular factor (SPECIFY AT NEXT QUESTION)

9 Can't choose/more than one main factor

10 Can't remember



IF (MainReas = Other) THEN

XMMainRes

TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

- 11 To please partner (inc. thought (s) he'd like me more; fear of rejection; dare not say no)
- 12 Felt ready; it was the right time; it was the right person (i.e. not in love)
- 13 Rape; I was forced

IF (MainReas = Choose) THEN

MMMainRes

Please tell me which ones applied.

CODE ALL THAT APPLY.

- 1 (M) I was curious about what it would be like
- 2 (C) I was carried away by my feelings
- 3 (F) Most people in my age group seemed to be doing it
- 4 (L) It seemed like a natural 'follow on' in the relationship
- 5 (R) I was a bit drunk at the time
- 6 (H) I wanted to lose my virginity
- 7 (D) I was in love
- 8 (S) Other particular factor (SPECIFY AT NEXT QUESTION)

IF Other IN MMMainRes THEN

XMMainRe

TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

- 9 To please partner
- 10 10 It was the right time; it was the right person (i.e. not in love)
- 11 Rape; I was forced

ENDIF

ENDIF

ENDIF

ENDIF

[CONTINUE: IF DMDEBUT=>13 THEN]

EverUsed

CARD J

Now I'd like to ask you a few more general questions about things affecting sex. First, from this list, could you tell me which you or a partner have ever used, together? Just tell me the code letters.

PROBE: What others?

CODE ALL THAT APPLY.

- 1 (A) Mini pill
- 2 (B) Combined pill
- 3 (C) Pill - not sure which
- 4 (D) Mirena
- 5 (E) Coil/other device
- 6 (F) Condom/male sheath/Durex
- 7 (G) Femidom (female sheath)
- 8 (H) Cap/diaphragm
- 9 (I) Gels, sprays, pessaries
- 10 (K) Contraceptive sponge
- 11 (L) Persona
- 12 (M) Safe period/rhythm method (other than Persona)
- 13 (N) Withdrawal
- 14 (P) Injections
- 15 (Q) Implanted capsules
- 16 (R) Emergency contraception
- 17 (S) (Partner has been/lan) sterilized
- 18 (T) (I have been/partner has been) sterilized
- 19 (U) Going without sex
- 20 (V) Other method of protection (SPECIFY AT NEXT QUESTION)
- 21 (W) No method used - ever

IF Other IN EverUsed THEN

XEverUsed

TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

- 22 Sterile from operation and/or for medical reason

ENDIF

IF 'No method used' at EverUsed THEN

UsedYear

CARD J AGAIN

And which have you used at all with a partner in the last year?

PROBE (Text maximum 25 characters)

- 1 (A) Mini pill
- 2 (B) Combined pill
- 3 (C) Pill - not sure which
- 4 (D) Mirena
- 5 (E) Coil/other device
- 6 (F) Condom/male sheath/Durex
- 7 (G) Femidom (female sheath)
- 8 (H) Cap/diaphragm
- 9 (I) Gels, sprays, pessaries
- 10 (K) Contraceptive sponge
- 11 (L) Persona
- 12 (M) Safe period/rhythm method (other than Persona)
- 13 (N) Withdrawal
- 14 (P) Injections
- 15 (Q) Implanted capsules

- 16(R) Emergency contraception  
 17 (S)(*Partner has been/lam*) sterilized  
 18(T)(*I have been/partner has been*) sterilized  
 19(U) Going without sex  
 20(V) Other method of protection (SPECIFY AT NEXT QUESTION)  
 21(W) No method used - ever

IF (UsedYear.CARDINAL > 1) THEN  
 IF NOT ((UsedYear.CARDINAL = 2) AND ((Condom IN UsedYear OR NoSex IN UsedYear)  
 OR Other IN UsedYear)) THEN

#### Double

You mentioned that you, and your partner(s), have used more than one method in the past year. In that year have you always used these methods on different occasions or have you sometimes used them in combination on the same occasion?

- 1 Always used on different occasions
- 2 Sometimes in combination on same occasion (including once only)
- 3 Always in combination on same occasion

#### ENDIF

#### UsualCon CARD J

Which would you say is your most usual method these days?  
 CODE UP TO 3 METHODS.

- 1 (A) Mini pill
- 2 (B) Combined pill
- 3 (C) Pill - not sure which
- 4 (D) Mirena
- 5 (E) Coil/other device
- 6 (F) Condom/male sheath/Durex
- 7 (G) Femidom (female sheath)
- 8 (H) Cap/diaphragm
- 9 (J) Gels, sprays, pessaries
- 10 (K) Contraceptive sponge
- 11 (L) Persona
- 12 (M) Safe period/rhythm method (other than Persona)
- 13 (N) Withdrawal
- 14 (P) Injections
- 15 (Q) Implanted capsules
- 16 (R) Emergency contraception
- 17 (S)(*Partner has been/lam*) sterilized
- 18 (T)(*I have been/partner has been*) sterilized
- 19 (U) Going without sex
- 20 (V) Other method of protection (SPECIFY AT NEXT QUESTION)
- 21 (W) None of these methods used - these days and have not needed to
- 22 No usual method

#### ENDIF

IF Condom IN UsedYear THEN

#### WhyCond

In the past year have you used condoms ...READ OUT...

- 1 to prevent pregnancy.
- 2 or to protect against HIV and other sexually transmitted diseases,
- 3 or both?

IF (WhyCond = Both) THEN

#### IfBoth

Which was the main reason: to prevent pregnancy or to protect against infection?

- 1 To prevent pregnancy
- 2 To prevent infection
- 3 Both equal
- 4 Depends on who the partner is
- 5 Don't know

#### ENDIF

#### ENDIF

/ASK ALL: INCLUDING IF DMDEBUT=>13/

#### FPSource

#### CARD K

In the past year have you sought advice on contraception, or obtained supplies, from any of these sources?  
 PROBE: Which others?

CODE ALL THAT APPLY.

- 1 (A) Your own GP (that is your doctor him or her self)
- 2 (B) Another doctor at your GP's surgery
- 3 (C) A Family Planning Clinic at your GP's surgery
- 4 (D) A Family Planning Clinic run by your local health authority
- 5 (E) A sexual health and contraception service for young people (for example, a Brook Advisory Centre)
- 6 (F) Chemist shop/pharmacy
- 7 (G) Over the counter at a petrol station/supermarket/other shop
- 8 (H) Vending machine
- 9 (J) Through the post
- 10 (K) Emergency Dept. of a hospital (for example for 'morning after' contraception)
- 11 (L) Any other type of service (SPECIFY AT NEXT QUESTION)
- 12 None of these

IF Other IN FPSource THEN

#### XPFSree

TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

- 13 GUM/VD/Urinary clinic
- 14 Other Dr./hospital/(medical) clinic e.g. well woman clinic; after treatment at hospital; college, military or work clinic/Dr; Dr abroad
- 15 Given by parent, relative, Partner provides
- 16 Retail outlet pub etc..

#### ENDIF

#### FPPref

#### CARD K

Looking at the top half of the card, if all these different types of service were available in your area now and easy to get to, which one do you think you would **prefer** to use for professional advice?

CODE ONE ONLY.

- 1 (A) Your own GP (that is your doctor him or her self)
- 2 (B) Another doctor at your GP's surgery
- 3 (C) A Family Planning Clinic at your GP's surgery
- 4 (D) A Family Planning Clinic run by your local health authority
- 5 (E) A sexual health and contraception service for young people (for example, a Brook Advisory Centre)
- 6 (F) Chemist shop/pharmacy
- 7 None of these

AttScale  
CARD L

Now please read this card carefully as it is important that you understand it and are as honest as you can be in your answer. When you've finished reading, tell me which letter represents your answer.

WAIT TILL RESPONDENT HAS READ CARD, THEN CODE ANSWER.

CARD SAYS (DO NOT READ OUT):

I have felt sexually attracted...

- 1 (K) Only to *(females/males)*, never to *(males/females)*
- 2 (C) More often to *(females/males)*, and at least once to a *(male/female)*
- 3 (F) About equally often to *(females/males)* and to *(males/females)*
- 4 (L) More often to *(males/females)*, and at least once to a *(female/male)*
- 5 (D) Only ever to *(males/females)*, never to *(females/males)*
- 6 (N) I have never felt sexually attracted to anyone at all
- 7 Refused

ExpScale  
CARD M

As before, please read this card carefully and be as honest as you can be in your answer. When you've finished reading, tell me which letter represents your answer.

WAIT TILL RESPONDENT HAS READ CARD, THEN CODE ANSWER.

CARD SAYS (DO NOT READ OUT):

Sexual experience is any kind of contact with another person that you felt was sexual (it could be just kissing or touching, or intercourse or any other form of sex). I have had some sexual experience...

- 1 (R) Only with *(females/males)* (or a *(female/male)*), never with a *(male/female)*
- 2 (Q) More often with *(females/males)*, and at least once with a *(male/female)*
- 3 (T) About equally often with *(females/males)* and with *(males/females)*
- 4 (B) More often with *(males/females)*, and at least once with a *(female/male)*
- 5 (Z) Only with *(males/females)* (or a *(male/female)*), never with a *(female/male)*
- 6 (W) I have never had any sexual experience with anyone at all
- 7 Refused

IF ((ExpScale IN [MOppos..OnlySa] OR (DMDebut >= 13)) OR (DAgeGr IN [1819..25145] AND ExpScale IN [OnlyOp, Ref])) THEN  
SCElig = Yes

ELSE  
SCElig = No

ENDIF

IF SCElig = No THEN

NotComp  
INTERVIEWER ONLY: THIS RESPONDENT DOES NOT QUALIFY FOR THE SELF-COMPLETION SECTION.  
PRESS 1 AND ENTER TO CONTINUE WITH NEXT FACE-TO-FACE SECTION.

1 Continue

ENDIF

IF SCElig = Yes THEN

IntLang [ETHNIC MINORITY BOOST ONLY: TO FILTER OTHER LANGUAGES TO BOOKLET]  
INTERVIEWER: CODE LANGUAGE OF INTERVIEW.

- 1 English
- 2 Punjabi
- 3 Urdu

ICASI

FIRST PRESS <Shift F2> TO SAVE THE DATA, THEN READ OUT TO ALL:

The next set of questions will probably be easier if you read them and answer them yourself, using the computer. The computer is very easy to use.

The questions are quite personal and, this way, your answers will be completely confidential and I won't see them. When you have finished, the whole section will get automatically locked up inside the computer so that I can't look back at it.

1 Continue

SCAccept

INTERVIEWER CODE:

- 1 Respondent accepted CASI
- 2 CASI to be asked face to face by interviewer
- 3 Respondent refused CASI (CODE REASON AT NEXT QUESTION)

IF SCAccept=3 THEN

XSCAccept

CODE REASON FOR REFUSAL.

CODE ALL THAT APPLY.

- 1 Didn't like computer
- 2 Eyesight problems
- 3 Could not read/write
- 4 Other disability
- 5 Objected to subject
- 6 Worried about confidentiality
- 7 Language problems
- 8 Ran out of time
- 9 Couldn't be bothered
- 10 Other - specify at next question

IF Other IN XSCAccept THEN

XSCAccept  
TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

ENDIF

ENDIF

IF XSCAccept = 1 OR 10 THEN

OfstAPI

OFFER (male/female) BOOKLET: Would you be willing to answer the questions using this booklet instead? After you've finished you'd put it in an envelope and seal it, so I will never see your answers.

- 1 Yes, willing to accept booklet
- 2 Not willing to accept booklet

IF OfstAPI = Yes THEN

HandOut

HAVE READY TO HAND TO RESPONDENT:

MALE BOOKLET: ENTER SERIAL NUMBER, THE DATE OF INTERVIEW, AND YOUR INTERVIEWER NUMBER ON FRONT.

Keep another copy of the booklet by you in case you need to refer to it to give advice/help.

- Envelope - ENTER SERIAL NUMBER.
- Pen
- Scrap paper
- 1 Continue

Intro

INTRODUCE BOOKLET:

The next set of questions, which are in this booklet, will probably be easier if you read and answer them yourself. When you have finished, put the booklet in the envelope and seal it.

ADD AS NECESSARY:

- The questions are quite personal and this way your answers will be completely confidential and I won't see them.
- We need to have a number on it so that the office will know which interview it belongs with. Our office can then check that everything for one person is complete. But names are never attached to answers.
- 1 Continue

Instruc

READ OUT TO ALL:

Some questions may not apply to you at all, and it does not usually take long to do. But it is very important to the research that you answer honestly and accurately so please just take as much time as you need. Here is some scrap paper in case you find it useful for jotting things down to help you remember. Most questions can be answered by ticking a box or by entering a number.

DEMONSTRATE A TICK BOX, A NUMBER ENTRY BOX AND A FILTER INSTRUCTION AT QUESTION 1. HAND CLOSED BOOKLET, AND PEN, TO RESPONDENT.

1 Continue

Terms

READ OUT TO ALL:

I should add that the booklet contains certain terms, like oral sex, anal sex and vaginal intercourse. So that everyone attaches the same meaning to these terms, they are defined in the front of the booklet. I'd like you to read them first.

If you need any help or explanation, do please ask. I will just be doing (some paperwork/something else) while you do the booklet.

1 Continue

SCOutC

WHEN RESPONDENT HAS FINISHED, BUT BEFORE ENVELOPE IS SEALED, ASK:

Thank you very much for doing all that. May I just ask whether you understood how to answer all the questions, or is there anything you would like me to explain, just to be sure?

INTERVIEWER CODE:

- 1 Booklet not completed (SPECIFY AT NEXT QUESTION)
- 2 Booklet completed [- all understood/no help given]
- 3 - help given during completion
- 4 - help given after completion

IF (SCOutC = NotComp) THEN

XIntro

TYPE IN REASON FOR NOT COMPLETING THE BOOKLET.

ENDIF

ENDIF

ENDIF

IF (SCAccept = Accept) THEN

InPrac

It is very important to the study that you answer honestly and accurately so please take your time. Here is a piece of scrap paper in case you find it useful for jotting things down to help you remember. First, let us do a couple of practice questions together to show you how it works.

HAND COMPUTER TO RESPONDENT AND EXPLAIN HOW (HE/SHE) SHOULD COMPLETE THE PRACTICE QUESTIONS.

Some questions use terms like oral sex and vaginal intercourse. So that everyone attaches the same meaning to these terms, we have some explanations of them, which I shall read out.

- 1 Continue

Prac1a

Have you ever used a computer before?

- 1 Yes
- 2 No

IF (Prac1a = Yes) THEN

Prac1b

Where have you used a computer before?

TYPE EACH NUMBER THAT APPLIES; USE SPACE BAR BETWEEN NUMBERS.

- 1 At work
- 2 At my own home
- 3 At another person's home
- 4 At a game or leisure centre
- 5 At some other place

ENDIF

IF (Prac1a = No) THEN

Prac1c

Have you used a typewriter at all?

- 1 Yes, a lot
- 2 Yes, a little
- 3 No

ENDIF

Prac2

What was your age last birthday?

TYPE IN YOUR AGE.

Range: 16..44

IF (Prac1a = No) THEN

Prac3

When was the last occasion you went out in the evening to a club, pub or restaurant?

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 6 months ago
- 4 Between 6 months and 1 year ago
- 5 Between 1 year and 5 years ago
- 6 Longer than 5 years ago
- 7 Can't remember when

ENDIF

EndPrac

THAT IS THE END OF THE PRACTICE QUESTIONS. NOW PLEASE ANSWER THE NEXT SET OF QUESTIONS BY YOURSELF.

SOME QUESTIONS USE TERMS LIKE ORAL SEX AND VAGINAL INTERCOURSE. SO THAT EVERYONE ATTACHES THE SAME MEANING TO THESE TERMS, THEY ARE EXPLAINED ON THE NEXT SCREEN. WOULD YOU PLEASE BE SURE TO READ THESE EXPLANATIONS. IF YOU NEED ANY FURTHER HELP OR EXPLANATIONS, DO ASK THE INTERVIEWER. PRESS <1> AND <Enter> TO CONTINUE.

Text: Maximum 1 character

ENDIF

ENDIF

**Terms1**

**PARTNERS OR SEXUAL PARTNERS:**  
People who have had sex together - whether just once, or a few times, or as regular partners, or as married partners.

**GENTAL AREA:**

A man's penis or a woman's vagina - that is, the sex organs.

**VAGINAL SEXUAL INTERCOURSE:**

A man's penis in a woman's vagina. This is what people most usually think of as 'having sex' or 'sexual intercourse'.

**ORAL SEX (oral sexual intercourse):**

A (woman/man's) or a (man/woman's) mouth on a partner's genital area.

**ANAL SEX (anal sexual intercourse):**

A man's penis in a partner's anus (rectum or back passage).  
PRESS <1> AND <Enter> TO CONTINUE.

**Terms2**

**SEXUAL INTERCOURSE, OR 'HAVING SEX':**

This includes vaginal, oral and anal sexual intercourse.

**GENTAL CONTACT NOT INVOLVING INTERCOURSE:**

Forms of contact with the genital area NOT leading to intercourse (vaginal, oral, or anal), but intended to achieve orgasm, for example, stimulating by hand.

**ANY SEXUAL CONTACT OR EXPERIENCE:**

This is a wider term and can include just kissing or cuddling, not necessarily leading to genital contact or intercourse.  
PRESS <1> AND <Enter> TO CONTINUE.

**Heterosexual Sex**

[CONTINUE: IF SCAccept = Respondent accepted CASI THEN]

**Opplnt**

The first set of questions is about sex with (WOMEN/MEN).  
PRESS <1> AND <Enter> TO CONTINUE.  
Text: Maximum 1 character

**Sex4Wks**

On how many occasions in the last 4 WEEKS have you had sex with a (WOMAN/MAN)?  
This means vaginal intercourse, oral sex, anal sex. Press <F9> if you want information about the meaning of these terms.

Please give an estimate if you can't say exactly.

TYPE IN THE NUMBER OF OCCASIONS IN THE LAST 4 WEEKS.

IF NONE IN THE LAST 4 WEEKS, ENTER '0'.

IF YOU HAVE NEVER IN YOUR LIFE HAD SEX WITH A (woman/man), TYPE IN '997'.

Range: 0..997

IF SEX4WKS>0 & < 997 THEN

**Est4Wks**

Are you certain about that number, or is it an estimate?

- 1 Certain
- 2 Estimate

**No4Wks**

With how many (WOMEN/MEN) have you had sex in the last 4 weeks?  
TYPE IN THE NUMBER.  
Range: 1..997

/EXAMPLE OF RANGE CHECK PROMPT BUILT INTO THE CASI:/

IF No4Wks >= 50 THEN

Just to check, is (response at No4Wks) the number of (women/men) you have had sex with in the last 4 weeks? If the answer is correct, press the letter S (Suppress) and continue.

ENDIF

/EXAMPLE OF CONSISTENCY CHECK PROMPT BUILT INTO THE CASI:/

IF Sex4Wks >= No4Wks THEN

Are you sure of that answer? You said that you had sex in the last 4 weeks with (response at No4Wks) partner(s), but on (response at Sex4Wks) occasion(s). If the answer is correct, press the letter S (Suppress) and continue. If you want to change an answer, use the arrow keys below the <Enter> key to highlight that answer and press <Enter>.

ENDIF

IF (No4Wks = 1) THEN

**N1In4Wk**

Was this a new partner with whom you had not had sex before?

- 1 Yes
- 2 No

ENDIF

IF (No4Wks > 1) THEN

**New4Wks**

How many of these were new partners with whom you had not had sex before?

TYPE IN THE NUMBER, '0' IF NONE.  
Range: 0..997

ENDIF

Cond4Wk

(*Did you use a condom (sheath)/ Was a condom (sheath) used*) on any occasions of having vaginal (or anal) sex with a (*woman/man*) in the last 4 weeks?

VAGINAL SEX IS WHAT IS MOST USUALLY THOUGHT OF AS 'HAVING SEX' OR 'SEXUAL INTERCOURSE':

- 1 Yes, used on every occasion
- 2 Yes, used on some occasions
- 3 No, not used in the last 4 weeks
- 4 Not had vaginal (or anal) sex in last 4 weeks

Sex7Day

On how many occasions in the last 7 DAYS have you had sex with a (*woman/man*)?  
TYPE IN THE NUMBER OF OCCASIONS IN THE LAST 7 DAYS, '0' IF NONE.

Range: 0..97

ENDIF

IF SEX4WKS <=> 997

LastVag

The next few questions are about different kinds of sex with (*WOMEN/MEN*).

When, if ever, was the last occasion you had VAGINAL SEXUAL INTERCOURSE with a

(*woman/man*)?

Vaginal sexual Intercourse is a man's penis in a woman's vagina (the most usual way of having sex).

IF NEVER, TYPE IN '7'.

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 6 months ago
- 4 Between 6 months and 1 year ago
- 5 Between 1 year and 5 years ago
- 6 Longer than 5 years ago
- 7 Never had vaginal intercourse

OralVag

When, if ever, was the last occasion you had oral sex with a (*woman/man*) by you to a partner, that is your mouth on a partner's genital area?

IF NEVER, TYPE IN '7'.

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 6 months ago
- 4 Between 6 months and 1 year ago
- 5 Between 1 year and 5 years ago
- 6 Longer than 5 years ago
- 7 Never had oral sex - by me to partner

OralPrT

When, if ever, was the last occasion you had oral sex with a (*woman/man*) - by a partner to you, that is a partner's mouth on your genital area?

IF NEVER, TYPE IN '7'.

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 6 months ago

- 4 Between 6 months and 1 year ago
- 5 Between 1 year and 5 years ago
- 6 Longer than 5 years ago
- 7 Never had oral sex - by partner to me

AnalSex

When, if ever, was the last occasion you had ANAL SEX with a (*woman/man*)?

Anal sex (anal sexual intercourse) is a man's penis in a partner's anus (rectum or back passage).  
IF NEVER, TYPE IN '7'.

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 6 months ago
- 4 Between 6 months and 1 year ago
- 5 Between 1 year and 5 years ago
- 6 Longer than 5 years ago
- 7 Never had anal sex

GenCont

When was the last occasion you had GENITAL CONTACT with a (*woman/man*) NOT involving intercourse?

GENITAL CONTACT NOT INVOLVING INTERCOURSE:

Forms of contact with the genital area NOT leading to intercourse (vaginal, oral, or anal), but intended to achieve orgasm, for example, stimulating by hand.

IF NEVER, TYPE IN '7'.

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 6 months ago
- 4 Between 6 months and 1 year ago
- 5 Between 1 year and 5 years ago
- 6 Longer than 5 years ago
- 7 Never had genital contact without intercourse as well

IF (LastVag IN [WEEK..YEAR] OR AnalSex IN [WEEK..YEAR]) THEN

YrCond

In the last YEAR have you ever had vaginal (*or anal*) intercourse with a (*woman/man*) without using a condom?

Press <F9> if you want information about the meaning of these terms.

Press <Esc> to close this information screen.

- 1 Yes (have had intercourse without a condom in the past year)
- 2 No (have used a condom on all occasions of vaginal (*or anal*) intercourse in the past year)

IF (YrCond = Yes) THEN

NoNoCon

With how many different (*WOMEN/MEN*) have you had vaginal (*or anal*) intercourse in the past year without using a condom?

TYPE IN THE NUMBER.

Press <F9> if you want information about the meaning of these terms.

Press <Esc> to close this information screen.

Range: 1..997

ENDIF

ENDIF

ENDIF

**Masturb**

When, if ever, was the last occasion you masturbated? That is aroused yourself sexually?

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 6 months ago
- 4 Between 6 months and 1 year ago
- 5 Between 1 year and 5 years ago
- 6 Longer than 5 years ago
- 7 Never masturbated or aroused myself sexually

[CONTINUE: IF SCAccept = Respondent accepted CASI THEN]

**SameInt**

The next set of questions is about sex with (MEN/WOMEN)

PRESS &lt;1&gt; AND &lt;Enter&gt; TO CONTINUE.

Text: Maximum 1 character

**EverHom**

Have you ever had ANY kind of sexual experience or sexual contact with a (male/female)? Please say 'yes' here, even if it was a long time ago or did not involve contact with the (genital area/penis/vagina).

Press &lt;F9&gt; if you want information about the meaning of this term.

Any sexual contact or experience:

This is a wider term and can include kissing or cuddling, not necessarily leading to (genital area/penis/vagina) contact or intercourse.

Press &lt;Esc&gt; to close this information screen.

1 Yes

2 No

IF (EverHom = Yes) THEN

**FirstHom**

How old were you the first time that happened?

TYPE IN THE AGE IN YEARS.

Range: 1..45

**GeniHom**

Have you had sex with a (man/woman) involving (genital area/penis/vaginal) contact?

(That is oral (or anal) sex or any other contact involving the genital area.)

Press &lt;F9&gt; if you want information about the meaning of this term.

1 Yes

2 No

IF (GeniHom = Yes) THEN

**AgeGHom**

And how old were you the first time you had sex with a (man/woman) involving (genital area/penis/vaginal) contact?

This could be the same age you just gave, or older.

TYPE IN THE AGE IN YEARS.

Range: 1..45

IF (AgeGHom &lt; 13) THEN

**NextAgeG**

Have you had sex with a (man/woman) involving (genital area/penis/vaginal) contact with anybody else since you turned 13?

1 Yes

2 Not with anybody else since age 13

ENDIF

IF (AgeGHom &gt; 12 or NextAgeG &lt;&gt; No) THEN

**Hom4Wks**

On how many occasions in the last 4 WEEKS have you had sex with a (man/woman)?

Please give an estimate if you can't say exactly.

TYPE IN THE NUMBER, '0' IF NONE.

Range: 0..997

IF (Hom4Wks &gt; 0) THEN



**HomEs4W**

Are you certain about that number or is it an estimate?

- 1 Certain
- 2 Estimate

**HomNo4W**

With how many (*men/women*) have you had sex in the last 4 weeks?  
TYPE IN THE NUMBER.

Range: 1..997

**IF (HomNo4W = 1) THEN**

**HI>New4W**

Was this a new partner with whom you had not had sex before?

- 1 Yes
- 2 No

**ENDIF**

**IF (HomNo4W > 1) THEN**

**HomNw4W**

How many of these were new partners with whom you had not had sex before?

TYPE IN THE NUMBER, '0' IF NONE.

Range: 0..997

**ENDIF**

**IF (DMSex = Male) THEN**

**HomCo4W**

Was a condom (sheath) used on any occasions of having anal sex with a man in the last 4 weeks?

- 1 Yes, used on every occasion
- 2 Yes, used on some occasions
- 3 No, not used in the last 4 weeks
- 4 Not had anal sex in the last 4 weeks

**ENDIF**

**Hom7Day**

On how many occasions in the last 7 DAYS have you had sex with a (*man/woman*)?

TYPE IN THE NUMBER, '0' IF NONE.

Range: 0..97

**ENDIF**

**HomOYou**

This is about different kinds of sex with (*male/female*) partners, involving contact with the (*genital area/penis/vaginal*).

When, if ever, was the last occasion you had **ORAL SEX** with a (*man/woman*) - **by you to a partner**, that is your mouth on a partner's genital area?

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 6 months ago
- 4 Between 6 months and 1 year ago
- 5 Between 1 year and 5 years ago
- 6 Longer than 5 years ago
- 7 Never had oral sex - by me to partner

**34**

**HomOPar**

When, if ever, was the last occasion you had **ORAL SEX** with a (*man/woman*) - **by a partner to you**, that is a partner's mouth on your genital area?

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 6 months ago
- 4 Between 6 months and 1 year ago
- 5 Between 1 year and 5 years ago
- 6 Longer than 5 years ago
- 7 Never had oral sex - by partner to me

**IF (DMSex = Male) THEN**

**HomAYou**

When, if ever, was the last occasion you had **ANAL SEX** with a man - **by you to a partner?**

Anal sex (anal sexual intercourse) is a man's penis entering a partner's anus (rectum or back passage).

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 6 months ago
- 4 Between 6 months and 1 year ago
- 5 Between 1 year and 5 years ago
- 6 Longer than 5 years ago
- 7 Never had anal sex - by me to partner

**HomAHim**

When, if ever, was the last occasion you had **ANAL SEX** with a man - **by a partner to you?**

Anal sex (anal sexual intercourse) is a man's penis entering a partner's anus (rectum or back passage).

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 6 months ago
- 4 Between 6 months and 1 year ago
- 5 Between 1 year and 5 years ago
- 6 Longer than 5 years ago
- 7 Never had anal sex - by partner to me

**ENDIF**

**HomGen**

When was the last occasion you had any **other form of sex** with a (*man/woman*) that involved

**GENITAL CONTACT** but **NOT** also oral (*or anal*) sex?

**Genital contact NOT involving intercourse** is forms of contact with the genital area **NOT** leading to

oral (*or anal*) intercourse, but intending to achieve orgasm, for example, by stimulating by hand.

Press <F9> if you want information about the meaning of other terms.

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 6 months ago
- 4 Between 6 months and 1 year ago
- 5 Between 1 year and 5 years ago
- 6 Longer than 5 years ago
- 7 Never had genital contact without oral and/or anal sex as well

**IF (HomAYou IN [WEEK..YEAR] OR HomAHim IN [WEEK..YEAR]) THEN**

**AnCom**

In the last year, when you've had anal sex, how often have you, or your partner, used a condom?

Anal sex (anal sexual intercourse) is a man's penis in a partner's anus (rectum or back passage).

- 1 Every time
- 2 Most of the times
- 3 Occasionally

4 Not at all in the last year

**IF AnCom IN [Most..None] THEN**  
**NoAnCom**  
 In the last year, with how many men have you had anal intercourse without using a condom?  
 Anal sex (anal sexual intercourse) is a man's penis in a partner's anus (rectum or back passage).  
 TYPE IN THE NUMBER, '0' IF NONE  
 Range: 0..997

**ENDIF**

**ENDIF**

**GayPub**  
 How often, if at all, do you go to gay pubs or clubs nowadays?  
 1 4 times a week or more  
 2 2 or 3 times a week  
 3 About once a week  
 4 At least once every 2 weeks  
 5 At least once a month  
 6 At least once every 3 months  
 7 At least once every 6 months  
 8 At least once a year  
 9 Less often  
 10 Never  
**ENDIF**  
**ENDIF**

**[CONTINUE: IF SCAccept = Respondent accepted CASI THEN]**

**PartInt**

The next questions are about the number of people you have had sex with at different times in your life  
 Please include everyone you have ever had sex with, whether it was just once, a few times, a regular partner or (wif/husband).

Be as accurate as you can: give your best estimate if you can't remember exactly.  
 PRESS <1> AND <Enter> TO CONTINUE.

Text: Maximum 1 character

**HetLife**

Altogether, in your life so far, with how many (WOMEN/MEN) have you had sexual intercourse (vaginal, oral or anal)?

TYPE IN THE NUMBER, '0' IF NONE.

Press <F9> if you want information about the meaning of these terms.

Range: 0..9997

**IF (HetLife > 4) THEN**

**HetSure**

Are you certain of that number or have you had to estimate it?

- 1 Certain
- 2 Estimate

**ENDIF**

**IF (HetLife > 0) THEN**

**HetSYrs**

Altogether, in the last 5 YEARS, with how many (WOMEN/MEN) have you had sexual intercourse?  
 TYPE IN THE NUMBER IN THE LAST 5 YEARS, '0' IF NONE.

Press <F9> if you want information about the meaning of these terms.

Range: 0..9997

**IF (HetSYrs > 0) THEN**

**Het1Yr**

AND -

Altogether, in the last YEAR, with how many (WOMEN/MEN) have you had sexual intercourse?  
 TYPE IN THE NUMBER IN THE LAST YEAR, '0' IF NONE.

Press <F9> if you want information about the meaning of these terms.

Range: 0..997

**IF (Het1Yr > 1) THEN**

**NoNewPt**

How many of these (WOMEN/MEN) were new partners who you had sex with for the first time during the last year?

TYPE IN THE NUMBER, '0' IF NONE.

Range: 0..997

**ELSEIF (Het1Yr = 1) THEN**

**HetNewP**

Was this (woman/man) a new partner who you had sex with for the first time during the last year?

- 1 Yes
- 2 No

ENDIF

ENDIF

IntroOS

In the last year, were there any (*WOMEN/MEN*) you had only oral sex with, and not vaginal (or anal) sex?

- 1 Yes  
2 No

IF (IntroOS = Yes) THEN

OralOn

With how many different (*WOMEN/MEN*) in the last year did you have only oral sex, and not vaginal (or anal sex)?

TYPE IN THE NUMBER.

Range: 1..997

OralPre

Previously, you said you had sex with (number given at Het1Yr) (*woman/women/man/men*) in the last year. Does this number include the (*woman/women/man/men*) you had only oral sex with?

- 1 Yes, included  
2 No, not included

ENDIF

IF ((OralPre = No) OR (OralOn &gt; Het1Yr)) THEN

HIYrTot

In total, how many different (*WOMEN/MEN*) did you have sex with in the last year, including those you had only oral sex with?

TYPE IN THE NUMBER.

Range: 1..997

ENDIF

ENDIF

ENDIF

IF (Het1Yr &gt; 0) THEN

Het3Mnt

Altogether, in the last 3 MONTHS, with how many (*WOMEN/MEN*) have you had sexual intercourse (vaginal, oral or anal)?

TYPE IN THE NUMBER IN THE LAST 3 MONTHS, '0' IF NONE.

Press &lt;F9&gt; if you want information about the meaning of these terms.

Range: 0..997

ENDIF

HomLife

Altogether, in your life so far, with how many (*MEN/WOMEN*) have you had sex (that is oral and anal sex and other forms of genital contact)?

TYPE IN THE NUMBER IN YOUR LIFE (SO FAR), '0' IF NONE.

Press &lt;F9&gt; if you want information about the meaning of these terms.

Range: 0..9997

IF (HomLife &gt; 4) THEN

HomSure

Are you certain of that number or have you had to estimate it?

- 1 Certain  
2 Estimate

ENDIF

IF (HomLife &gt; 0) THEN

HomSYrs

Altogether, in the last 5 YEARS, with how many (*MEN/WOMEN*) have you had sex? TYPE IN THE NUMBER IN THE LAST 5 YEARS, '0' IF NONE.

Range: 0..9997

IF (HomSYrs &gt; 0) THEN

Hom1Yr

AND -

Altogether, in the last YEAR, with how many (*MEN/WOMEN*) have you had sex? TYPE IN THE NUMBER IN THE LAST YEAR, '0' IF NONE.

Range: 0..997

IF (Hom1Yr &gt; 1) THEN

HNoNewP

How many of these (*MEN/WOMEN*) were new partners who you had sex with for the first time during the last year?

TYPE IN THE NUMBER, '0' IF NONE.

Range: 0..997

ELSEIF (Hom1Yr = 1) THEN

HomNewP

Was this (*man/woman*) a new partner who you had sex with for the first time during the last year?

- 1 Yes  
2 No

ENDIF

IF (Hom1Yr &gt; 0) THEN

Hom3Mnt

AND -

Altogether, in the last 3 MONTHS, with how many (*MEN/WOMEN*) have you had sex? TYPE IN THE NUMBER IN THE LAST 3 MONTHS, '0' IF NONE.

Range: 0..997

ENDIF

ENDIF

ENDIF

ENDIF



[CONTINUE: IF SCAccept = Respondent accepted CASI THEN]

IF (HETLIFE>0) OR (HOMLIFE>0) THEN

IntroR

The next set of questions are about the people you had sex with most recently.  
Think now of the person you had sex with MOST RECENTLY, whether this was quite recently or some while ago. This may be a man or a woman you had sex with just once, or a few times, or a regular partner or a husband.

THIS LOOP IS REPEATED FOR EACH PARTNER (UPTO THREE) THAT THE RESPONDENT HAS HAD IN THE LAST FIVE YEARS. IF NONE IN LAST FIVE YEARS, LOOP IS ASKED ONCE OF THE MOST RECENT PARTNER

IN ADDITION, IF RESPONDENT HAS HAD SEX WITH OPPOSITE SEX PARTNER TO THE PARTNERS JUST DESCRIBED: LOOP REPEATED FOR THAT PERSON:

(The recent partner (s) you have just answered were all men/women. At an earlier question you said that you also had sex with a woman/man. Please answer the next few questions about the MOST RECENT woman/man that you had sex with.)

PRESS <I> AND <Enter> TO CONTINUE.

Text: Maximum 1 character

R1DateY

THE PERSON YOU HAD SEX WITH MOST RECENTLY/THE 2<sup>ND</sup> / 3<sup>RD</sup> MOST RECENT PERSON YOU HAD SEX WITH IN THE LAST FIVE YEARS

When was the most recent occasion you had sex with that person?

TYPE IN THE YEAR (4 DIGITS) AT THIS QUESTION AND THE MONTH AT THE NEXT QUESTION.

Range: 1952..2001

R1DateM

THE PERSON YOU HAD SEX WITH MOST RECENTLY/THE 2<sup>ND</sup> / 3<sup>RD</sup> MOST RECENT PERSON YOU HAD SEX WITH IN THE LAST FIVE YEARS

TYPE IN THE MONTH NUMBER. IF YOU CAN'T REMEMBER THE MONTH, TYPE IN '97'.

- 1 January
- 2 February
- 3 March
- 4 April
- 5 May
- 6 June
- 7 July
- 8 August
- 9 September
- 10 October
- 11 November
- 12 December
- 97 Can't remember the month

IF HETLIFE>0 AND HOMLIFE>0 THEN

R1Sex

Is that person (female or male/male or female)?

- 1 Male
- 2 Female

ENDIF

IF (RSEX=MALE) OR (RSEX=FEMALE AND RISEX=MALE) THEN

R1CondL

THE PERSON YOU HAD SEX WITH MOST RECENTLY/THE 2<sup>ND</sup> / 3<sup>RD</sup> MOST RECENT PERSON YOU HAD SEX WITH IN THE LAST FIVE YEARS  
(Was/Did you use) a condom (used) on that most recent occasion?

- 1 Yes
- 2 No

ENDIF

R1First

THE PERSON YOU HAD SEX WITH MOST RECENTLY/THE 2<sup>ND</sup> / 3<sup>RD</sup> MOST RECENT PERSON YOU HAD SEX WITH IN THE LAST FIVE YEARS

Was that (most recent) occasion also the FIRST occasion with that person, or not?

- 1 Yes, the first occasion
- 2 No, not the first occasion

IF (R1First = No) THEN

R1FY

THE PERSON YOU HAD SEX WITH MOST RECENTLY/THE 2<sup>ND</sup> / 3<sup>RD</sup> MOST RECENT PERSON YOU HAD SEX WITH IN THE LAST FIVE YEARS

When was the FIRST occasion with that person?

TYPE IN THE YEAR AT THIS QUESTION AND THE MONTH AT THE NEXT QUESTION.

Range: 1952..2001

R1FM

THE PERSON YOU HAD SEX WITH MOST RECENTLY/THE 2<sup>ND</sup> / 3<sup>RD</sup> MOST RECENT PERSON YOU HAD SEX WITH IN THE LAST FIVE YEARS

TYPE IN THE MONTH NUMBER. IF YOU CAN'T REMEMBER THE MONTH, TYPE IN '97'.

- 1 January
- 2 February
- 3 March
- 4 April
- 5 May
- 6 June
- 7 July
- 8 August
- 9 September
- 10 October
- 11 November
- 12 December
- 97 Can't remember the month

IF (RSEX=MALE) OR (RSEX=FEMALE AND RISEX=MALE) THEN

R1CondF

THE PERSON YOU HAD SEX WITH MOST RECENTLY/THE 2<sup>ND</sup> / 3<sup>RD</sup> MOST RECENT PERSON YOU HAD SEX WITH IN THE LAST FIVE YEARS

And (was/did you use) a condom (used) on that FIRST occasion with this person?

- 1 Yes
- 2 No

ENDIF

ENDIF

RIPtAge

THE PERSON YOU HAD SEX WITH MOST RECENTLY/THE 2<sup>ND</sup> / 3<sup>RD</sup> MOST RECENT

PERSON YOU HAD SEX WITH IN THE LAST FIVE YEARS

How old was that person on the FIRST occasion you had sex together?

TYPE IN THE AGE IN YEARS.

IF YOU DON'T KNOW THE AGE, TYPE IN 97.

Range: 1..97

RIRelat

THE PERSON YOU HAD SEX WITH MOST RECENTLY/THE 2<sup>ND</sup> / 3<sup>RD</sup> MOST RECENT

PERSON YOU HAD SEX WITH IN THE LAST FIVE YEARS

Are you now, or were you ever...

- 1 married to each other,
- 2 or, living together as a couple, but never married,
- 3 or, regular partners, but never lived together,
- 4 or, not regular partners (so far)?

IF FOR SECOND AND THIRD PARTNER, RIMEET TO RIKNOWN ONLY REPEATED IF

RIRELAT=4

RIMeet

THE PERSON YOU HAD SEX WITH MOST RECENTLY/THE 2<sup>ND</sup> / 3<sup>RD</sup> MOST RECENT

PERSON YOU HAD SEX WITH IN THE LAST FIVE YEARS

Where did you FIRST meet that person?

- 1 At school
- 2 At university or college
- 3 At work (or through work)
- 4 In a pub, cafe, restaurant, bar, club
- 5 At a social event organised by friend(s), such as party, drinks, meal
- 6 Through a society, sports club or interest group
- 7 On holiday or while travelling
- 8 In a public place (such as a park, museum, street, on a bus)
- 9 Through a dating agency, chat line or personal advertisement
- 10 Have always known each other (for example as neighbours or family friends)
- 11 Other (TYPE IN '1' AND THEN TYPE IN THE ANSWER AT THE NEXT QUESTION)

IF (RIMeet = Other) THEN

RIMeet=0

THE PERSON YOU HAD SEX WITH MOST RECENTLY/THE 2<sup>ND</sup> / 3<sup>RD</sup> MOST RECENT

PERSON YOU HAD SEX WITH IN THE LAST FIVE YEARS

TYPE IN WHERE YOU FIRST MET AND THEN PRESS <Enter>.

Text: Maximum 60 characters

- 12 At church
- 13 Neighbour lived locally/shared a flat or house
- 14 At a public place (not covered by 4) (eg. at a shop, hairdressers, hospital, etc)
- 15 Arranged marriage
- 16 Prostitute/red light district
- 17 Through friends or relatives/at a friend's or relative's house/mutual friends/blind date (only use if no other code possible)

ENDIF

Rlive

THE PERSON YOU HAD SEX WITH MOST RECENTLY/THE 2<sup>ND</sup> / 3<sup>RD</sup> MOST RECENT

PERSON YOU HAD SEX WITH IN THE LAST FIVE YEARS

When you FIRST met that person, where did (HE/SHE) normally live?

- 1 In the same town or city as you did

- 2 In the same region as you, but in a different town
- 3 In a different region, but the same country as you
- 4 In a different country from you
- 5 Don't know

RIKnown

THE PERSON YOU HAD SEX WITH MOST RECENTLY/THE 2<sup>ND</sup> / 3<sup>RD</sup> MOST RECENT

PERSON YOU HAD SEX WITH IN THE LAST FIVE YEARS

How long was it between FIRST meeting that person (answer given at RIMeet) and first having sex with (him/her)?

- 1 24 hours or less
- 2 Between 1 day and 1 week
- 3 Between 1 week and 4 weeks
- 4 Between 4 weeks and 6 months
- 5 Between 6 months and 1 year
- 6 Between 1 year and 5 years
- 7 Between 5 years and 10 years
- 8 10 years or more

IntrEnd

Thank you for answering questions about your most recent partner (S)

(You have just answered some questions about the person you had sex with most recently. Now think of the OTHER people you have had sex with in the last 5 YEARS and answer the next few questions about the SECOND MOST RECENT person you had sex with).

(That completes the questions about your second most recent partner. Now think of the THIRD MOST RECENT person you had sex with in the last 5 YEARS (that is, a different person from the two you have just answered about)).

The final questions for you to answer on the computer are on a number of other things to do with sex. PRESS <1> AND <Enter> TO CONTINUE.

ENDIF

Paying for sex

[CONTINUE: IF SC Accept = Respondent accepted CASI THEN:]

IF (Rsex = Male) THEN

EverPd

Have you ever paid money for sex with a woman?

- 1 Yes
- 2 No

IF (EverPd = Yes) THEN

LastPay

When was the last time you paid money for sex with a woman?

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 1 year ago
- 4 Between 1 year and 5 years ago
- 5 Longer than 5 years ago

NoPaid

In your lifetime, to about how many different women, altogether, have you paid money for sex?

TYPE IN THE NUMBER.

Range: 1..997

IF (HetLife>NoPaid) THEN

PayPrev

Previously, you said you had sex with (answer given at HetLife) (woman/women/man/men) in your life. Does this include the (woman/women/man/men) you paid money for sex?

- 1 Yes, included
- 2 No, not included

ENDIF

ENDIF

IF (EverHom <> No) THEN

HomPaid

Have you ever paid money for sex with a man?

- 1 Yes
- 2 No

IF (HomPaid = Yes) THEN

HomPLst

When was the last time you paid money for sex with a man?

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 1 year ago
- 4 Between 1 year and 5 years ago
- 5 Longer than 5 years ago

HomPdNo

In your lifetime, to about how many men, altogether, have you paid money for sex?

TYPE IN THE NUMBER.

Range: 1..997

IF (HomLife > HomPdNo) THEN

HomPdP

Previously, You said you had sex with (answer given at HomLife) (man /MEN) in your life Does this include the (man/MEN) you paid money for sex?

- 1 Yes, included
- 2 No, not included

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

[CONTINUE: IF SCAccept = Respondent accepted CASI THEN]

IF (Rsex = Female) THEN

Miscarr

Have you ever had a pregnancy that ended in miscarriage or still birth?

- 1 Yes
- 2 No

IF (Miscarr = Yes) THEN

WhnMisc

When was that?

(The last time, if more than once.)

- 1 In the last year
- 2 Between 1 year and 5 years ago
- 3 Between 5 years and 10 years ago
- 4 Longer than 10 years ago

ENDIF

Abort

Have you ever had a termination of pregnancy (abortion)?

- 1 Yes
- 2 No

IF (Abort = Yes) THEN

ManyAb

How many terminations of pregnancy (abortions) have you had?

Range: 1..20

IF (ManyAb = 1) THEN

AgeAb

What age were you then?

PLEASE TYPE IN THE AGE IN YEARS.

Range: 12..45

[NOTE: ERROR AT AgeAbFir, SHOULD HAVE READ 'What age were you when you had the FIRST termination'.]

ELSEIF (ManyAb > 1) THEN

AgeAbFir

What age were you when you had the termination?

PLEASE TYPE IN THE AGE IN YEARS.

Range: 12..45

AgeAbLas

What age were you when you had the last one?

PLEASE TYPE IN THE AGE IN YEARS.

Range: 12..45

ENDIF

ENDIF

ENDIF



**Infertility**

[CONTINUE: IF SCAccept = Respondent accepted CASI THEN]

**Infertl**

Have you ever had a time, lasting 6 months or longer, when you and your partner were trying for a pregnancy but it didn't happen?

- 1 Yes
- 2 No

**MedHelp**

Have you (or your partner) ever sought medical or professional help about infertility?

- 1 Yes
- 2 No

**Sexually Transmitted Diseases**

[CONTINUE: IF SCAccept = Respondent accepted CASI THEN]

**STDCLin**

Have you ever attended a sexually transmitted disease (STD) clinic or special (VD) clinic?

- 1 Yes
- 2 No

IF (STDCLin = Yes) THEN

**WhnCLin**

When was that?

(The last time if more than once.)

- 1 In the last 4 weeks
- 2 Between 4 weeks and 3 months ago
- 3 Between 3 months and 1 year ago
- 4 Between 1 year and 2 years ago
- 5 Between 2 years and 3 years ago
- 6 Between 3 years and 4 years ago
- 7 Between 4 years and 5 years ago
- 8 Longer than 5 years ago

**ENDIF****Diagnos**

Have you ever been told by a doctor that you had any of the following?

PLEASE TYPE IN THE NUMBERS FOR ANY YOU MAY HAVE HAD.

IF MORE THAN ONE, PRESS THE SPACEBAR BETWEEN EACH NUMBER.

IF NONE, TYPE IN '11'.

- 1 Herpes (genital herpes)
- 2 Trichomonas (Trich, TV)
- 3 Gonorrhoea
- 4 Syphilis
- 5 Chlamydia
- 6 NSU (Non Specific Urethritis), NGU (Non Gonococcal Urethritis)
- 7 Genital warts (venereal warts, Human Papilloma Virus, HPV)
- 8 (WOMEN ONLY:) Pelvic Inflammatory Disease (PID, salpingitis)
- 9 (WOMEN ONLY:) Vaginal thrush (Candida, Yeast infection)
- 10 Yes, but can't remember which
- 11 None of these

IF Diag=1, 2, 3, 4, 5, 6, 7 OR 8 THEN REPEAT WhnDiag FOR EACH

**WhnDiag**

When were you told by a doctor that you had (answer given at Diagnos)?

TYPE IN THE YEAR (MOST RECENT IF MORE THAN ONCE).

IF YOU CAN'T REMEMBER, TYPE IN '9'.

Range: 9..2001

**ENDIF**

IF Diag=2, 3, 4, 5 THEN REPEAT DiagNo AND DiagWher FOR EACH

**DiagNo**

How many times in the last five years have you been told by a doctor that you had (answer given at

Diagnos)?

ONLY INCLUDE SEPARATE EPISODES.

Range: 1..97

**DiagWher**

Where were you (last) treated for (answer given at *Diagnos*)?

- 1 GP's surgery
- 2 NHS VD/STD Sexual health clinic
- 3 NHS Family planning clinic
- 4 Private clinic or doctor
- 5 Somewhere else

ENDIF

**Inject**

Have you ever injected yourself with any drugs or other substances, medical or otherwise?

- 1 Yes
- 2 No

IF (Inject = Yes) THEN

**Prescrb**

Were any of these drugs or other substances that you injected prescribed for you, by a doctor, for a

medical condition?

- 1 Yes, ALL prescribed
- 2 Some prescribed, some not
- 3 No, none prescribed

IF Prescrb = All or Some prescribed THEN

**MedCond**

For what condition were the drugs prescribed?

IF MORE THAN ONE, TYPE IN ALL THE NUMBERS BEFORE PRESSING <Enter>, PRESS THE SPACE BAR BETWEEN EACH NUMBER.

- 1 Diabetes
- 2 Allergic disorders
- 3 Chronic pain
- 4 Thrombosis/Embolus (blood clot)
- 5 Infections
- 6 Psychiatric illness
- 7 Drug addiction
- 8 Other

ENDIF

ENDIF

IF Prescrb = Some or None prescribed THEN

**WhenInj**

When was the last time you injected yourself with non-prescribed drugs or other substances?

- 1 In the last 7 days
- 2 Between 7 days and 4 weeks ago
- 3 Between 4 weeks and 1 year ago
- 4 Between 1 year and 5 years ago
- 5 Longer than 5 years ago

**Needle**

Have you shared a needle, or other equipment used for injecting, with someone else?

- 1 Yes
- 2 No

ENDIF

**HIV/AIDS Testing**

[CONTINUE: IF SCAccept = Respondent accepted CASI THEN]

**DonBlod**

Since the BEGINNING OF 1986 have you donated blood, that is, been a blood donor?

- 1 Yes
- 2 No, never

IF (DonBlod = Yes) THEN

**WhenDon**

When was the last time you donated blood?

- 1 In the last year
- 2 Between 1 year and 2 years ago
- 3 Between 2 years and 5 years ago
- 4 Longer than 5 years ago but since the beginning of 1986

**HIVTestY**

Apart from any occasion when you were donating blood, have you ever had a blood test that involved testing for HIV (the virus that causes AIDS)?

- 1 Yes
- 2 No
- 3 Maybe/Not sure
- 4 Prefer not to answer

ENDIF

**HIVTestN**

Have you ever had a blood test that involved testing for HIV, the virus that causes AIDS?

- 1 Yes
- 2 No
- 3 Maybe/Not sure
- 4 Prefer not to answer

IF HIVTestN = Yes OR HIVTestY = Yes THEN

**WhyTest**

Has this been in connection with...

IF MORE THAN ONE, TYPE IN ALL THE NUMBERS BEFORE PRESSING <Enter>, PRESS THE SPACE BAR BETWEEN EACH NUMBER.

- 1 (being pregnant/a pregnancy of your wife/husband/partner),
- 2 insurance, mortgage, or travel,
- 3 a general health check,
- 4 concern about personal risks to yourself or your partner,
- 5 or, other reason(s)?

**WhenTest**

When was that test?

(the last HIV test if more than one)

- 1 In the last year
- 2 Between 1 year and 2 years ago
- 3 Between 2 years and 5 years ago
- 4 Longer than 5 years ago

**WherTest**

Where were you tested?

(the last HIV test if more than one)

- 1 GP's surgery
- 2 NHS VD/STD/Sexual health clinic

- 3 NHS Family planning clinic
- 4 Private clinic or doctor
- 5 Somewhere else

**ResTest**

Were you given the result of the test?  
 (We do NOT want to know what the result was.)

- 1 Yes, was given the result
- 2 No, not given the result

ENDIF

**[CONTINUE: IF SCAccept = Respondent accepted CASI THEN]**

**IfDysf**

Some people go through times when they are not interested in sex or find it difficult to enjoy sexual intercourse.

In the last year, that is since (answer given at LDateLY), have you experienced any of the following for one month or longer?

- Lacked interest in having sex
- Felt anxious just before having sex about your ability to perform sexually
- Were unable to come to a climax (experience an orgasm)
- Came to a climax (experienced an orgasm) too quickly
- Experienced physical pain during intercourse
- (MEN ONLY: Had trouble achieving or maintaining an erection)
- (WOMEN ONLY: Had trouble lubricating)

- 1 Yes
- 2 No

**IF IFDysf = Yes THEN**

**WhDysf**

Which have you experienced in the last year?

PLEASE TYPE IN THE NUMBERS FOR ANY YOU HAVE EXPERIENCED FOR ONE MONTH

OR LONGER.

IF MORE THAN ONE, PRESS THE SPACE BAR BETWEEN EACH NUMBER.

- 1 Lacked interest in having sex
- 2 Felt anxious just before having sex about your ability to perform sexually
- 3 Were unable to come to a climax (experience an orgasm)
- 4 Came to a climax (experienced an orgasm) too quickly
- 5 Experienced physical pain during intercourse
- 6 (Had trouble achieving or maintaining an erection
- 7 (Had trouble lubricating)

**LongDys**

For how long did that period last, when you (answer given at DysF)?

- 1 At least one month, but less than 3 months
- 2 At least 3 months, but less than 6 months
- 3 At least 6 months, but less than 1 year
- 4 1 year or longer

**AvolSex**

During the last year, have you ever avoided having sex because of (this condition/ either of these/ any of these conditions)?

- 1 Yes
- 2 No

**Contact**

During the last year, have you contacted any of the following for help with (this condition/ either of these/ any of these conditions)?

TYPE IN THE NUMBERS FOR ANY YOU HAVE CONTACTED.

IF MORE THAN ONE, PRESS THE SPACE BAR BETWEEN EACH NUMBER.

IF NONE, TYPE IN '8'.

- 1 GP
- 2 VD/STD/Sexual health clinic
- 3 Psychiatrist or psychologist
- 4 Marriage counsellor
- 5 Other type of clinic or doctor
- 6 Contacted a helpline

- 7 Someone else  
8 None of these

IF [GP/VD/Psychiatrist/Marriage counsellor/other type of clinic] IN Contact THEN

IfCon

Was this (answer given at Contact) NHS or private?

- 1 NHS  
2 Private  
3 Other (such as a voluntary organisation)  
4 Don't know

ENDIF

ENDIF

End of self-completion

[CONTINUE: IF SCAccept = Respondent accepted CASI THEN]

IF RESPONDENT DOES NOT DO SELF-COMPLETION, THEN CIRCUM AND PERIODS ASKED  
FACE TO FACE]

IF Rsex = Male

Circum

Are you circumcised?

- 1 Yes  
2 No

ENDIF

IF Rsex = Female

Periods

How old were you when you started menstruating (having periods)?

TYPE IN THE AGE IN YEARS

PLEASE GIVE AN ESTIMATE IF YOU CANT REMEMBER EXACTLY.

Range: 1..45

ENDIF

Willing

When you were first told by the interviewer that you were selected to take part in this survey, how willing were you to take part?

- 1 Very willing  
2 Fairly willing  
3 Not at all willing

Satis

That was the last question for you to answer on the computer yourself. We hope that you were able to answer the questions without too much trouble.

Now that you have reached the end, thinking back, are there any answers you would like to change, or is there anything you would like to add to any of the answers you have given?

YOU CAN TYPE IN TWO CHOICES BY PRESSING THE SPACEBAR BETWEEN EACH NUMBER.

- 1 I would like to change one (or more) answers  
2 I would like to add some information  
3 No changes

IF Change IN Satis THEN

Amend

Please ask the interviewer for assistance about how you may go back to a question in order to change your answer.

The interviewer will NOT have to look at the computer screen or be told any of your answers in order to help.

When you come back to this screen, type 1 and press <Enter> to continue.

- 1 Continue

ENDIF

IF AddSome IN Satis THEN

AddInfo

Please type anything you would like to add, or ask the interviewer for some paper to write your comments.

PRESS <Esc> (Escape) WHEN YOU HAVE FINISHED.

**Attitudes****ImpFaith****CARD N**

Now I would like to ask you some questions on your **views** about marriage and sexual relationships.

As I read from this list, please look at the card and tell me how important you think each one is to a successful marriage or long-term relationship ...**READ OUT**...

...Faithfulness?

- 1 Very important
- 2 Quite important
- 3 Not very important
- 4 Not at all important
- 8 Don't know

**ImpInc****CARD N**

(Tell me how important you think each one is to a successful marriage or long-term relationship)

...An adequate income?

- 1 Very important
- 2 Quite important
- 3 Not very important
- 4 Not at all important
- 8 Don't know

**ImpResp****CARD N**

(Tell me how important you think each one is to a successful marriage or long-term relationship)

...Mutual respect and appreciation?

- 1 Very important
- 2 Quite important
- 3 Not very important
- 4 Not at all important
- 8 Don't know

**ImpRelig****CARD N**

(Tell me how important you think each one is to a successful marriage or long-term relationship)

...Shared religious beliefs?

- 1 Very important
- 2 Quite important
- 3 Not very important
- 4 Not at all important
- 8 Don't know

**ImpSexRel****CARD N**

(Tell me how important you think each one is to a successful marriage or long-term relationship)

...A happy sexual relationship?

- 1 Very important
- 2 Quite important
- 3 Not very important
- 4 Not at all important
- 8 Don't know

**ImpShare****CARD N**

(Tell me how important you think each one is to a successful marriage or long-term relationship)

...Sharing household chores?

- 1 Very important
- 2 Quite important
- 3 Not very important
- 4 Not at all important
- 8 Don't know

**ImpChild****CARD N**

(Tell me how important you think each one is to a successful marriage or long-term relationship)

...Having children?

- 1 Very important
- 2 Quite important
- 3 Not very important
- 4 Not at all important
- 8 Don't know

**ImpTaste****CARD N**

(Tell me how important you think each one is to a successful marriage or long-term relationship)

...Tastes and interests in common?

- 1 Very important
- 2 Quite important
- 3 Not very important
- 4 Not at all important
- 8 Don't know

**RWPremar****CARD P**

Now, from this card, what are your opinions about the following sexual relationships ...**READ OUT**...

If a man and a woman have sexual relations before marriage, what would your general opinion be?

- 1 Always wrong
- 2 Mostly wrong
- 3 Sometimes wrong
- 4 Rarely wrong
- 5 Not wrong at all
- 8 Depends/Don't know

**RWAdult****CARD P**

What about a married person having sexual relations with someone other than his or her partner?

- 1 Always wrong
- 2 Mostly wrong
- 3 Sometimes wrong
- 4 Rarely wrong
- 5 Not wrong at all
- 8 Depends/Don't know

**RWCohab****CARD P**

What about a person who is living with a partner, not married, having sexual relations with someone other than his or her partner?

- 1 Always wrong
- 2 Mostly wrong

- 3 Sometimes wrong  
4 Rarely wrong  
5 Not wrong at all  
8 Depends/Don't know

#### RWRegP CARD P

And a person who has a regular partner they don't live with, having sexual relations with someone else?

- 1 Always wrong  
2 Mostly wrong  
3 Sometimes wrong  
4 Rarely wrong  
5 Not wrong at all  
8 Depends/Don't know

#### RWCasual CARD P

And what is your opinion about a person having one night stands?

- 1 Always wrong  
2 Mostly wrong  
3 Sometimes wrong  
4 Rarely wrong  
5 Not wrong at all  
8 Depends/Don't know

#### RWHomM CARD P

What is your general opinion about...

...sexual relations between two adult men?

- 1 Always wrong  
2 Mostly wrong  
3 Sometimes wrong  
4 Rarely wrong  
5 Not wrong at all  
8 Depends/Don't know

#### RWHomF CARD P

And sexual relations between two adult women?

- 1 Always wrong  
2 Mostly wrong  
3 Sometimes wrong  
4 Rarely wrong  
5 Not wrong at all  
8 Depends/Don't know

#### RWAbort CARD P

Lastly, what is your general opinion about abortion?

- 1 Always wrong  
2 Mostly wrong  
3 Sometimes wrong  
4 Rarely wrong  
5 Not wrong at all  
8 Depends/Don't know

#### AgAffec CARD Q

Now please would you say how far you agree or disagree with each of these things...

Companionship and affection are more important than sex in a marriage or relationship?

- 1 Agree strongly  
2 Agree  
3 Neither agree nor disagree  
4 Disagree  
5 Disagree strongly  
8 Don't know

#### AgOrgasM CARD Q

Sex without orgasm, or climax, cannot be really satisfying for a man?

- 1 Agree strongly  
2 Agree  
3 Neither agree nor disagree  
4 Disagree  
5 Disagree strongly  
8 Don't know

#### AgOrgasF CARD Q

Sex without orgasm, or climax, cannot be really satisfying for a woman?

- 1 Agree strongly  
2 Agree  
3 Neither agree nor disagree  
4 Disagree  
5 Disagree strongly  
8 Don't know

#### AgSExImp CARD Q

Sex is the most important part of any marriage or relationship?

- 1 Agree strongly  
2 Agree  
3 Neither agree nor disagree  
4 Disagree  
5 Disagree strongly  
8 Don't know

#### Frequent CARD R

Thinking of the way things are for you these days, which one of these would you really prefer?

- 1 (Q) To have sex much more often than I do now  
2 (K) To have sex a bit more often  
3 (M) It is about right as it is  
4 (D) To have sex a little less often  
5 (V) To have sex much less often than I do now

#### Satisfy CARD S

And which one of these applies best to you?

CARD SAYS: (DO NOT READ OUT)

When I have sex these days...

- 1 (E) I always enjoy it

- 2 (U) I enjoy it most of the time  
 3 (P) I don't often enjoy it  
 4 (N) I never enjoy it  
 5 (F) I don't have sex these days

**EasyYou****CARD T**

Some people who have sex together find it easy to talk openly about it, others find it difficult to talk openly about it - for example to tell each other what they like and dislike in sex.  
 What about you, how easy or difficult would it be for you?

- 1 (C) Easy with a husband, wife or regular partner, but difficult with a new partner  
 2 (L) Easy with a new partner, but difficult with a husband, wife or regular partner  
 3 (B) Easy with any partner  
 4 (K) Difficult with any partner  
 5 Depends/Would vary/Can't say/Don't know

**IdealNow****CARD U**

Which of these lifestyles would you regard as the ideal one for you at this stage of your life?

- 1 (T) Prefer to have no sex activity  
 2 (Q) No regular partners but casual partners when I feel like it  
 3 (B) A few regular partners  
 4 (S) One regular partner but not living together  
 5 (L) Not married, but living with a partner and with some sex activity outside the partnership  
 6 (Z) Not married, but living with a partner, and no other sex partners  
 7 (N) Married, with some sex activity outside the marriage  
 8 (H) Married, with no other sex partners  
 9 Have no ideal / None of these / Don't know

**Ideal5Yr****CARD U**

What about the future, say in five years time, which one do you think will be your ideal then?

- 1 (T) Prefer to have no sex activity  
 2 (Q) No regular partners but casual partners when I feel like it  
 3 (B) A few regular partners  
 4 (S) One regular partner but not living together  
 5 (L) Not married, but living with a partner and with some sex activity outside the partnership  
 6 (Z) Not married, but living with a partner, and no other sex partners  
 7 (N) Married, with some sex activity outside the marriage  
 8 (H) Married, with no other sex partners  
 9 Have no ideal / None of these / Don't know

**AnyChang**

Have you changed your own sexual lifestyle in any way, or made any decisions about sex, because of concern about catching the HIV virus that causes AIDS, or other sexually transmitted diseases?

- 1 Yes  
 2 No  
 3 Lifestyle has changed but not because of AIDS

**IF (AnyChang = Yes) THEN****HowChang****CARD V**

In which of these ways have you changed?

Please tell me the letters of all those that apply to you.

PROBE: Which other ways? CODE ALL THAT APPLY.

- 1 (B) Having fewer partners  
 2 (L) Finding out more about a person before having sex

- 3 (K) Using a condom  
 4 (C) Not having sex  
 5 (X) Sticking to one partner  
 6 (Q) Avoiding some sexual practices  
 7 (N) Other change(s)

**ENDIF****RskYou****CARD W**

There are different opinions about how many people are at risk of becoming infected with HIV, the virus that causes AIDS, but we would like to know what you think about the risks to you, personally, with your present sexual lifestyle?

Please choose one of the answers from this card.

- 1 (H) Greatly at risk  
 2 (B) Quite a lot  
 3 (W) Not very much  
 4 (S) Not at all at risk  
 8 Don't know

**RskProm****CARD W**

Now please choose a phrase from this card to tell me how much at risk you think each of these groups is from HIV and AIDS.

...People who have many different partners of the opposite sex?

- 1 (H) Greatly at risk  
 2 (B) Quite a lot  
 3 (W) Not very much  
 4 (S) Not at all at risk  
 8 Don't know  
 9 Depends on whether they use condoms/practice safe sex

**RskMarr****CARD W**

...Married couples who only have sex with each other?

- 1 (H) Greatly at risk  
 2 (B) Quite a lot  
 3 (W) Not very much  
 4 (S) Not at all at risk  
 8 Don't know  
 9 Depends on whether they use condoms/practice safe sex

**RskMOcc****CARD W**

...Married couples who occasionally have sex with someone other than their regular partner?

- 1 (H) Greatly at risk  
 2 (B) Quite a lot  
 3 (W) Not very much  
 4 (S) Not at all at risk  
 8 Don't know  
 9 Depends on whether they use condoms/practice safe sex

**RskHomM****CARD W**

...Male homosexuals - that is gay men?

- 1 (H) Greatly at risk  
 2 (B) Quite a lot

- 3 (W) Not very much  
 4 (S) Not at all at risk  
 8 Don't know  
 9 Depends on whether they use condoms/practice safe sex

**RskHomF****CARD W**

...Female homosexuals - that is lesbians?

- 1 (H) Greatly at risk  
 2 (B) Quite a lot  
 3 (W) Not very much  
 4 (S) Not at all at risk  
 8 Don't know  
 9 Depends on whether they use condoms/practice safe sex

**RskDrugs****CARD W**

...People who inject themselves with illegal drugs?

- 1 (H) Greatly at risk  
 2 (B) Quite a lot  
 3 (W) Not very much  
 4 (S) Not at all at risk  
 8 Don't know  
 9 Depends (e.g. on whether they share needles)

**CfGBUSA****CARD X**

Compared with Britain, do you think people living in the following countries are more likely or less likely to become infected with HIV and AIDS?

...First, the United States?

- 1 Much more likely  
 2 Somewhat more likely  
 3 About the same as in Britain  
 4 Somewhat less likely  
 5 Much less likely  
 8 Can't say

**CfGBSwi****CARD X**

Switzerland?

- 1 Much more likely  
 2 Somewhat more likely  
 3 About the same as in Britain  
 4 Somewhat less likely  
 5 Much less likely  
 8 Can't say

**CfGBKen****CARD X**

...Kenya?

- 1 Much more likely  
 2 Somewhat more likely  
 3 About the same as in Britain  
 4 Somewhat less likely  
 5 Much less likely  
 8 Can't say

**CfGBNeth****CARD X**

...The Netherlands, that is Holland?

- 1 Much more likely  
 2 Somewhat more likely  
 3 About the same as in Britain  
 4 Somewhat less likely  
 5 Much less likely  
 8 Can't say

**CfGBThai****CARD X**

...Thailand?

- 1 Much more likely  
 2 Somewhat more likely  
 3 About the same as in Britain  
 4 Somewhat less likely  
 5 Much less likely  
 8 Can't say



**MarStat**

Finally, a few questions about you and your household.

At present are you ... READ OUT AS FAR AS NECESSARY TO CODE...

- 1 ... married (and living with your (wife/husband)).
- 2 living with a (woman/man), as a couple,
- 3 living with a (man/woman), as a couple,
- 4 widowed,
- 5 divorced,
- 6 separated,
- 7 or, single and never been married?

IF (MarStat = married, living as opposite sex couple, living as same sex couple) THEN

**PAGE**

What was your (wife/husband/partner's) age last birthday?

Range: 16..97

ENDIF

IF (MarStat = Single) THEN

**PPLive**

Have you ever lived as a couple with a (woman or man/man or woman) to whom you were not married?

- 1 Yes
- 2 No

ENDIF

IF (MarStat IN [Married..Separ] OR (PPLive = Yes)) THEN

**PPNum**

I would like to ask about every occasion that you have been married or lived with someone as a couple.

First, can I check, how many times have you been married or lived with someone as a couple?

ENTER NUMBER OF MARRIAGES AND COHABITATIONS.

INCLUDE ONLY COHABITATIONS OF ONE MONTH OR LONGER.

INCLUDE GAY/LESBIAN COHABITATIONS.

Range: 1..20

/REPEAT PPYSTRT TO PPMSTOP FOR EACH COHABITATION UP TO 20/

**PPYSTrt**

(I'd like to begin by asking you about the first occasion you were married or living with someone as a couple/ I'd like to ask you about this occasion/ Now I'd like to ask about the first/ second/ third etc partner.)

When did you first start living with (your current/this partner) - in what year?

Range: 1969..2001

**PPMStrt**

And which month in that year?

- 1 January
- 2 February
- 3 March
- 4 April
- 5 May
- 6 June
- 7 July
- 8 August
- 9 September
- 10 October

11 November

12 December

97 Can't remember the month

IF (MarStat <> Single) THEN

**PPMS**

At that time, were you married or living as a couple?

- 1 Married
- 2 Living as a couple

IF (PPMS = Cohab) THEN

**PPMar**

IF NECESSARY, ASK: (Can I check,) Did you get married to this partner?

- 1 Yes
- 2 No

IF (PPMar = Yes) THEN

**PPYMar**

When did you get married - in what year?

Range: 1969..2001

**PPMMar**

And which month in that year?

- 1 January
- 2 February
- 3 March
- 4 April
- 5 May
- 6 June
- 7 July
- 8 August
- 9 September
- 10 October
- 11 November
- 12 December

ENDIF

ENDIF

ENDIF

/PPSex ONLY ASKED ON THE ETHNIC MINORITY BOOST:/

IF ((PPMS <> married) AND (PPMar <> Yes)) THEN

**PPSex**

And this partner was ...READ OUT AS FAR AS NECESSARY TO CODE...

- 1 ...of the opposite sex
- 2 ...or of the same sex?

ENDIF

IF (Respondent no longer living with that partner) THEN

**PPYStop**

When did you stop living with this partner - in what year?

STILL LIVING WITH IF THEY CONTINUED TO SHARE A DWELLING.

Range: 1969..2001

PPNISStop

And which month in that year?

1

January

2

February

3

March

4

April

5

May

6

June

7

July

8

August

9

September

10

October

11

November

12

December

97

Can't remember the month

IF LAST PREVIOUS COHABITATION THEN

PPWWhy

CARD C1

Why did your relationship with this partner end - can you just tell me the code letters?

PROBE: What other reason?

CODE ALL THAT APPLY.

1

(N) Unfaithfulness/adultery

2

(Z) Money problems

3

(E) Difficulties with sex life

4

(K) Different interests/nothing in common

5

(S) Grew apart

6

(R) Not having children

7

(X) Lack of respect or appreciation

8

(J) Domestic violence

9

(O) Arguments

10

(Y) Not sharing household chores enough

11

(V) Moved because of change in circumstances (eg. changed jobs)

12

(D) Death of partner

13

(F) Other (SPECIFY AT NEXT QUESTION)

ENDIF

IF Other IN PPWWhy THEN

XPPWWhy

TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

14

Drink, drugs or gambling problem

15

Mental health or related problem

16

Problem with children

17

Never at home

18

Problems with parents in laws/family

19

Age problem

20

Another relationship involved

21

Lived in/moved to different country or different region

22

Change of mind/feelings/personality

23

Partner just left - no explanation

ENDIF

ENDIF

ENDIF

HHSIZE

Now I'd like to check who is living in your household at present.

Including yourself, how many people live here regularly as members of this household.

ENTER NUMBER OF PEOPLE.

Range: 1..14

/REPEAT Gender TO Relior FOR EACH OTHER HOUSEHOLD MEMBER/

Gender

(You already told me about you and your partner.) I would (now) like to ask about the others in your household:

Is person no (1/2/3 etc) male or female?

1

Male

2

Female

AgeOf

What was the age last birthday of person no (1/2/3 etc)?

Range: 0..120

RelToR

How is person no (1/2/3 etc) related to you?

1

Spouse/partner

2

(Son/Daughter) (incl step/adopted/in-law)

3

Parent (incl step/in-law)

4

(Brother/Sister) (incl half/in-law)

5

Grandparent

6

Grandchild

7

Other relative

8

Non-relative

9

(Code not used)

END REPEAT

Tenure

Do you (or your household) own or rent this (house/flat/accommodation)?

1

Own outright or with mortgage/loan

2

Rent, from Council

3

Rent, from Housing Association

4

Rent, from Private landlord

5

Tied to job (incl. rent free)

6

Squat

7

Other (SPECIFY AT NEXT QUESTION)

IF (Tenure = Other) THEN

XTenure

TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

ENDIF

LiveHere

Have you always lived in this (city/town/village)?

'City' INCLUDES ALL OF LONDON.

1

Yes

2

No

IF (LiveHere = No) THEN

WhenMove

How old were you when you moved to this (city/town/village)?

ENTER AGE. IF LESS THAN 1, ENTER 0.

IF LEFT AND CAME BACK, GET AGE WHEN RETURNED.

Range: 0..45

ENDIF

BornIn

Were you born in ...READ OUT AS FAR AS NECESSARY TO CODE...

1 ... England

2 Wales,

2 Scotland,

3 Northern Ireland/Eire,

7 or, another country? (SPECIFY AT NEXT QUESTION)

ENGLAND INCLUDES CHANNEL ISLANDS.

IF (BornIn = Other) THEN

XBornIn

TYPE IN OTHER COUNTRY GIVEN, PRESS <Esc> WHEN FINISHED.

8 Europe -EU country

9 Europe - (non-EU) including eastern Europe, Russia, Scandinavia, Turkey, Cyprus, etc.

10 Australia, New Zealand

11 North America (USA, Canada, America)

12 South America, Central America (including Mexico)

13 Caribbean countries (including Trinidad/Tobago, Cuba, Haiti, Puerto Rico, Bahamas)

14 India, Pakistan, Bangladesh

15 Other Asia (China, Thailand, Singapore, Hong Kong, Indonesia etc.)

16 Middle East, North African countries (Iran and countries westwards to Morocco)

17 West Africa (Western Sahara and countries eastwards to Chad and Cameroon, including Nigeria)

18 Central and East Africa (including Ethiopia, Sudan, Zimbabwe, etc)

19 South Africa (Republic of)

20 Other/Not identifiable

ENDIF

IF BornIn IN [NIEire..Other] THEN

AgeBrit

How old were you when you first came to live in Britain?

ENTER AGE. IF LESS THAN 1, ENTER 0.

Range: 0..45

ENDIF

RActiv

CARD C2

Which of these descriptions applies to what you were doing last week, that is, in the seven days ending last

Sunday?

PROBE: Which others?

CODE ALL THAT APPLY.

1 Going to school or college full-time (including on vacation)

2 On government training or employment scheme (eg. the New Deal)

3 In paid employment or self-employment (or away temporarily)

4 Waiting to take up paid work already obtained

5 Unemployed and registered for benefit

- 6 Unemployed, not registered, but actively looking for a job
- 7 Unemployed, wanting a job (of at least 10 hours per week), but not actively looking for a job
- 8 Permanently unable to work because of long-term sickness or disability
- 9 Looking after the home or family
- 10 Doing something else (SPECIFY AT NEXT QUESTION)
- 11 Retired

IF Other IN RActiv THEN

XRActiv

TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

ENDIF

RActivHi

Highest code at ActivR

1 Going to school or college full-time (including on vacation)

2 On government training or employment scheme (eg. the New Deal)

3 In paid employment or self-employed for at least 10 hours a week (or away temporarily)

4 Waiting to take up paid work already obtained

5 Unemployed and registered for benefit

6 Unemployed, not registered, but actively looking for a job

7 Unemployed, wanting a job (of at least 10 hours per week), but not actively looking for a job

8 Permanently unable to work because of long-term sickness or disability

9 Looking after the home or family

10 Doing something else (SPECIFY AT NEXT QUESTION)

IF JPdWork IN RActiv THEN

Hours

How many hours a week do you usually work in this job?

PROMPT WITH PRECODES IF NECESSARY.

1 35 or more

2 10, to under 35

3 Less than 10

IF Hours IN [m35..f10c34] THEN

REvtrAway

Does your job ever take you away from home for at least one night (or more) at a time?

EXCLUDE SHIFT WORKING.

1 Yes

2 No

IF (REvtrAway = Yes) THEN

RNgAway

In the past 12 months, about how many nights have you spent away from home in connection with your job?

EXCLUDE SHIFT WORKING.

Range: 0..365

ENDIF

ENDIF

ENDIF

IF ((Hours = l10) OR (NOT JPdWork IN RActiv AND NOT WaitWork IN RActiv)) THEN

RLastJob

1 1 or 2  
2 3 - 24  
3 25 - 499  
4 500+

**REmpSIC**  
What (*does/did*) your employer make or do at the place where you (*work/will work/worked*)?  
Text: Maximum 80 characters

**ELSEIF ((REmpStat = SelfEmp) AND (RDiretr <> Yes)) THEN**

**RSENum**  
(*Do/Will/Did*) you have any employees?

- 1 None
- 2 1 - 24
- 3 25 - 499
- 4 500+

**RSESIC**  
What (*do/will/did*) you make or do in your business?  
Text: Maximum 80 characters

**ENDIF**

**ENDIF**

**ENDIF**

**IF MarStat IN [married..PrtSame] THEN**

**CIE**

Do you or your partner have the largest income, whether from employment, state benefits, investments or any other source?

- 1 Respondent
- 2 Partner
- 3 Both equally

**PActiv**

**CARD C2**  
Which of these descriptions applies to what your (*wife/husband/partner*) was doing last week, that is, in the seven days ending last Sunday?

**PROBE: Which others?**

**CODE ALL THAT APPLY.**

- 1 Going to school or college full-time (including on vacation)
- 2 On government training or employment scheme (eg. the New Deal)
- 3 In paid employment or self-employment (or away temporarily)
- 4 Waiting to take up paid work already obtained
- 5 Unemployed and registered for benefit
- 6 Unemployed, not registered, but actively looking for a job
- 7 Unemployed, wanting a job (of at least 10 hours per week), but not actively looking for a job
- 8 Permanently unable to work because of long-term sickness or disability
- 9 Retired
- 10 Looking after the home or family
- 11 Doing something else (SPECIFY AT NEXT QUESTION)

**IF Other IN PActiv THEN**

**XPActiv**

**TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.**

When did you last have a paid job of at least 10 hours a week (*other than the government scheme you mentioned*)?

- 1 Never had a paid job of 10+ hours week
- 2 Only jobs have been holiday/vacation/gap year/Saturday jobs
- 3 Within past 6 months
- 4 Over 6 months to 1 year ago
- 5 Over 1 to 5 years ago
- 6 Over 5 to 10 years ago
- 7 Over 10 to 20 years ago
- 8 Over 20 years ago

**ENDIF**

**IF NOT RLastJob IN [Never..Hols, Year20..Over20] THEN**

**RJobTit**

I'd like to ask you some details about (*the job you/ were doing last week/you are waiting to take up/ the last job you had of at least 10 hours a week*)

What (*is/was*) the name or title of the job?

**IF 2+ JOBS, ASK ABOUT MAIN JOB.**

Text: Maximum 80 characters

**RJobDes**

What kind of work (*do you do/will you be doing/did you do*) most of the time?

Text: Maximum 80 characters

**RMachine**

**IF RELEVANT: What materials or machinery (*do/will/did*) you use?**

**IF NONE USED, TYPE IN 'None'.**

Text: Maximum 80 characters

**RQualif**

What skills or qualifications (*are/were*) needed for that job?

Text: Maximum 80 characters

**REmpStat**

(*Are/Will/Were*) you (*be*) ...READ OUT...

- 1 ...an employee.
- 2 or, self-employed?

**IF (REmpStat = SelfEmp) THEN**

**RDirectr**

(*Are/Will/Were*) you (*be*) a Director of a limited company?

- 1 Yes
- 2 No

**ENDIF**

**IF ((REmpStat = Emp) OR (RDirectr = Yes)) THEN**

**RManage**

(*Are/Will/Were*) you (*be*) a ...READ OUT...

- 1 ...a manager.
- 2 foreman or supervisor,
- 3 or, other employee?

**REmpNum**

Including yourself, about how many people (*are/were*) employed at the place where you (*work/will work/worked*)?

ENDIF

IF NOT PLastJob IN [Never..Hols, Year20..Over20] AND CIE IN [partner..Both] THEN

PJobTid

I'd like to ask you some details about (*the job he/she was doing last week/is waiting to take up/the last job your wife/husband/partner had of at least 10 hours a week*).

What (*is/will be/was*) the name or title of the job?

IF 2+ JOBS, ASK ABOUT MAIN JOB.

Text: Maximum 80 characters

PJobDes

What kind of work (*does/will/did/ he/she/does most of the time/be doing/do*)?

Text: Maximum 80 characters

PMachine

IF RELEVANT: What materials or machinery (*does/will/did*) (*SHE/HE*) use?

IF NONE USED, TYPE IN 'None'.

Text: Maximum 80 characters

PQualif

What skills or qualifications (*are/were*) needed for that job?

Text: Maximum 80 characters

PEmpStat

(*Is/Will/Was*) (*SHE/HE*) (*be*) ...READ OUT ...

1 ...an employee,

2 or, self-employed?

IF (PEmpStat = SelfEmp) THEN

PDirctr

(*Is/Will/Was*) (*SHE/HE*) (*be*) a Director of a limited company?

1 Yes

2 No

ENDIF

IF ((PEmpStat = Emp) OR (PDirctr = Yes)) THEN

PManage

(*Is/Will/Was*) (*SHE/HE*) (*be*) a ...READ OUT ...

1 ...a manager,

2 foreman or supervisor,

3 or, other employee?

PEmpNum

Including your (*wife/husband/partner*), about how many people (*are/were*) employed at the place where (*SHE/HE*) (*works/will work/worked*)?

1 1 or 2

2 3 - 24

3 25 - 499

4 500+

PEmpSIC

What (*does/did*) (*her/his*) employer make or do at the place where (*SHE/HE*) (*works/will work/worked*)?

ENDIF

PActivHi

Highest code at PActiv

1 Going to school or college full-time (including on vacation)

2 On government training or employment scheme (eg. the New Deal)

3 In paid employment or self-employed for at least 10 hours a week (or away temporarily)

4 Waiting to take up paid work already obtained

5 Unemployed and registered for benefit

6 Unemployed, not registered, but actively looking for a job

7 Unemployed, wanting a job (of at least 10 hours per week), but not actively looking for a job

8 Permanently unable to work because of long-term sickness or disability

9 Looking after the home or family

10 Doing something else (SPECIFY AT NEXT QUESTION)

IF JPdWork IN PActiv THEN

PHours

How many hours a week does your (*wife/husband/partner*) usually work in that job?

PROMPT WITH PRECODES IF NECESSARY.

1 35 or more

2 10, to under 35

3 Less than 10

IF PHours IN [m35..f1034] THEN

PEvrAway

Does your (*wife/husband/partner*'s) job ever take (*her/him*) away from home for more than one night at a time?

1 Yes

2 No

IF (PEvrAway = Yes) THEN

PNgAway

In the past 12 months, about how many nights has (*SHE/HE*) spent away from home in connection with (*her/his*) job?

Range: 0..365

ENDIF

ENDIF

ENDIF

ENDIF

IF (PHours = 110) OR (NOT JPdWork IN PActiv AND NOT WaitWork IN PActiv) THEN

PLastJob

When did your (*wife/husband/partner*) last have a paid job of at least 10 hours a week (*other than the government scheme you mentioned*)?

1 Never had a paid job of 10+ hours/week

2 Only jobs have been holiday/vacation/gap year/Saturday jobs

3 Within past 6 months

4 Over 6 months to 1 year ago

5 Over 1 to 5 years ago

6 Over 5 to 10 years ago

7 Over 10 to 20 years ago

8 Over 20 years ago

```
Text: Maximum 80 characters

ELSEIF ((PEmpStat = SelfEmp) AND (PDirctr <> Yes)) THEN
PSENum
(Does/Will/Did) (SHE/HE) have any employees?
1 None
2 1 - 24
3 25 - 499
4 500+

PSESIC
What (does/will/did) (SHE/HE) make or do in (her/his) business?
Text: Maximum 80 characters

ENDIF

ENDIF

TEdAge
At what age did you complete your continuous full-time education?
If you had a 'gap' year between school and university or college please include it as continuous.
IF NOT YET FINISHED, ENTER 96.
Range: 1..96

AnyExam
CARD C3
Have you passed any exams or got any of the qualifications on this card?
1 Yes
2 No, none

IF (AnyExam = Yes) THEN
Exams
CARD C3
Please read down the list and tell me the highest qualification that you have, that is, the first one you
come to.
CODE ONE ONLY.
1 Degree level qualification
2 A-levels
3 AS level
4 SLC Higher Grade, etc
5 O-level, 1975 or earlier
6 O-level, after 1975 A-C
7 O-level, after 1975 D-E
8 GCSE GRADES A-C
9 GCSE GRADES D-G
10CSE GRADE 1, etc
11CSE GRADES 2-5, etc
12CSE Ungraded
13SLC Lower
14SUPE Lower or Ordinary
15School Certificate
16Foreign qualification

ENDIF
```

```
AnyQual
CARD C4
And do you have any of the qualifications on this card?
1 Yes
2 No, none

IF (AnyQual = Yes) THEN
Quals
CARD C4
Which ones? Please read out the numbers. PROBE: Which others?
CODE ALL THAT APPLY.
1 Teaching qualification
2 Nursing qualification
3 HNC/HND, etc
4 ONC/OND, etc
5 City & Guilds Full
6 City & Guilds Advanced
7 City & Guilds Craft
8 NVQ Level 5
9 NVQ Level 4
10NVQ Level 3, etc
11NVQ Level 2, etc
12NVQ Level 1, etc
13Recognised trade apprenticeship completed
14Clerical or Commercial Qual
15Other vocational or professional qualification (SPECIFY AT NEXT QUESTION)

IF Other IN Quals THEN
XQuals
TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

ENDIF

ENDIF

IF ((AnyExam = Yes) OR (AnyQual = Yes)) THEN
QualYr
In what year did you obtain your most recent qualification?
TYPE IN YEAR.
Range: 1964..2001

ENDIF

TypeSch
Was the last school you attended a mixed school or for (boys/girls) only?
EXCLUDE 6TH FORM COLLEGE; INCLUDE 6TH FORM AT A SCHOOL IF RESPONDENT WAS IN
6TH FORM.
1 Mixed school
2 Single sex school
3 Single sex up to 6th form but mixed 6th form

Boarder
Was any of your secondary schooling as a boarder at a boarding school?
1 Yes
2 No

IF ((BothMaPa = Yes) OR MaOrPa IN [Mother, Father]) THEN
```

**IF (BelRelig = Yes) THEN**

**WHIRel**

Which one?

- 1 Christian - no denomination
- 2 Roman Catholic
- 3 Church of England/Anglican
- 4 United Reform Church (URC)
- 5 Congregational
- 6 Baptist
- 7 Methodist
- 8 Presbyterian/Church of Scotland
- 9 Other Christian (SPECIFY AT NEXT QUESTION)
- 10 Hindu
- 11 Jew
- 12 Islam/Muslim
- 13 Sikh
- 14 Buddhist
- 15 Other non-Christian (SPECIFY AT NEXT QUESTION)

**IF (WHIRel = OthChr) OR (WHIRel = OthNC) THEN**

**XWHIRel**

TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

- 16 Jehovah's Witness

**ENDIF**

**OthRelig**

Apart from special occasions such as weddings and funerals, how often do you attend services or meetings connected with your religion?

- 1 Once a week or more
- 2 Less often but at least once in two weeks
- 3 Less often but at least once a month
- 4 Less often but at least twice a year
- 5 Less often but at least once a year
- 6 Less often
- 7 Never or practically never
- 8 Varies

**ENDIF**

**Ethnic**

**CARD C6**

To which of the ethnic groups on this card do you consider you belong?

- 1 White
- 2 Mixed ethnic group
- 3 Asian or Asian British
- 4 Black or Black British
- 5 Chinese
- 6 Other ethnic group (SPECIFY AT NEXT QUESTION)

**IF (Ethnic = Other) THEN**

**XEthnic**

INTERVIEWER: PLEASE SPECIFY OTHER ETHNIC GROUP.

- Text: Maximum 60 characters
- 7 Middle eastern

**ELSEIF (Ethnic = White) THEN**

**Par1Occ**

**CARD C5**

This card shows different types of jobs. Which one best describes the sort of work your (mother/father)

(does now/did when you were aged 16)?

**IF (mother/father) DIDN'T HAVE A JOB, THEN ASK ABOUT THE JOB ^ (SHE/HE) USED TO**

**HAVE CODE ONE ONLY.**

- 1 Farmer or farm manager
- 2 Farm worker
- 3 Skilled manual work (plumber, electrician, fitter, train driver, cook, hairdresser)
- 4 Semi-skilled or unskilled manual work (machine operator, assembler, postman, waitress, cleaner, labourer)
- 5 Professional or technical work (doctor, accountant, school teacher, social worker, computer programmer, nurse)
- 6 Manager or administrator (company director, manager, executive officer, local authority officer)
- 7 Clerical (clerk, secretary)
- 8 Sales (telephone selling, shop assistant)
- 9 (Never had job/permanently sick or disabled)
- 10 Other job-other answer - SPECIFY AT NEXT QUESTION
- 11 Can't say

**IF (Par1Occ = Other) THEN**

**XPar1Occ**

TYPE IN OTHER ANSWER GIVEN, PRESS <Esc> WHEN FINISHED.

**ENDIF**

**IF Par1Occ IN [Farmer..Sales] THEN**

**Par2Occ**

Was your (mother/father) self-employed or did (SHE/HE) work for someone else as an employee?

- 1 Self-employed, had own business or farm
- 2 Worked for someone else

**Par3Occ**

Was (SHE/HE)...

- 1 a supervisor or foreman of manual workers,
- 2 or, a supervisor or manager of non-manual workers,
- 3 or, neither?

**ENDIF**

**ENDIF**

**ReligImp**

How important are religion and religious beliefs to you, now?

Is it ...READ OUT...

- 1 very important,
- 2 fairly important,
- 3 not very important,
- 4 or not important at all?

**BelRelig**

Thinking of the present time, do you regard yourself as belonging to any particular religion?

- 1 Yes
- 2 No, none

**[ON THE ETHNIC MINORITY BOOST WHIRel INCLUDED THE FOLLOWING PRE-CODES:**

*Rastafarian AND Seventh-Day Adventist)*

**WhWhite**  
What is your cultural background? Is it British, Irish or any other background?  
1 British  
2 Irish  
3 Other background (SPECIFY AT NEXT QUESTION)

**IF (WhWhite = Other) THEN**  
**XWhWhite**  
INTERVIEWER: PLEASE SPECIFY OTHER BACKGROUND.  
Text: Maximum 60 characters

**ENDIF**

**ELSEIF (Ethnic = Mixed) THEN**  
**WhMixed**  
What is your cultural background? Is it White British and Black Caribbean, White British and Black African, White British and Asian, or any other mixed background?  
1 White British and Black Caribbean  
2 White British and Black African  
3 White British and Asian  
4 Other mixed background (SPECIFY AT NEXT QUESTION)

**IF (WhMixed = Other) THEN**  
**XWhMixed**  
INTERVIEWER: PLEASE SPECIFY OTHER MIXED BACKGROUND.  
Text: Maximum 60 characters

**ENDIF**

*/WhMixAs AND XwhMixAs ASKED ONLY AT ETHNIC MINORITY BOOST:/*

**IF WhMixed = "White British and Asian" THEN**  
**WhMixAs**  
Is that White British and Indian, White British and Pakistani, or White British and another Asian background?  
1 White British and Indian,  
2 White British and Pakistani,  
3 White British and other Asian background (SPECIFY AT NEXT QUESTION)

**ENDIF**

**IF WhMixAs = Other THEN**  
**XWhMixAs**  
INTERVIEWER: WRITE IN OTHER WHITE BRITISH AND ASIAN BACKGROUND.:STRING {60}

**ENDIF**

**ELSEIF (Ethnic = Asian) THEN**  
**WhAsian**  
What is your cultural background? Is it Indian, Pakistani, Bangladeshi or any other Asian background?  
1 Indian  
2 Pakistani  
3 Bangladeshi  
4 Other asian background (SPECIFY AT NEXT QUESTION)

**IF (WhAsian = Other) THEN**  
**XWhAsian**  
INTERVIEWER: PLEASE SPECIFY OTHER ASIAN BACKGROUND.  
Text: Maximum 60 characters

**ENDIF**

**ELSEIF (Ethnic = Black) THEN**  
**WhBlack**  
What is your cultural background? Is it Caribbean, African or any other Black background?  
1 Caribbean  
2 African  
3 Other black background (SPECIFY AT NEXT QUESTION)

**IF (WhBlack = Other) THEN**  
**XWhBlack**  
INTERVIEWER: PLEASE SPECIFY OTHER BLACK BACKGROUND.  
Text: Maximum 60 characters

*/ETHNIC MINORITY BOOST INCLUDED Republic of the Congo (Congo/Brazzaville)' AND 'Tanzania' AS PRE-CODES AT AfrCoun:/*

**IF (WhBlack = African) THEN**  
**AfrCoun**  
Which particular country in Africa?  
1 Dem. Rep. of Congo (Zaire)  
2 Ghana  
3 Kenya  
4 Nigeria  
5 South Africa  
6 Uganda  
7 Zambia  
8 Zimbabwe  
9 Other (SPECIFY)

**IF (AfrCoun = Other) THEN**  
**AfrOth**  
INTERVIEWER: ENTER 'OTHER' COUNTRY.  
Text: Maximum 60 characters

**ENDIF**

**ENDIF**

*/WhCar AND XwhCar ONLY ASKED ON ETHNIC MINORITY BOOST:/*

**IF WhBlack = Caribbean THEN**  
**WhCar**  
Whereabouts in the Caribbean?  
IF MORE THAN ONE, PROBE FOR MAIN.  
1 Bahama Islands  
2 Bermuda  
3 Cuba  
4 Dominican Republic  
5 Jamaica  
6 Haiti



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3 White British and Asian  
4 Other mixed background (SPECIFY AT NEXT QUESTION)

**IF (PWbMixed = Other) THEN**  
XPWbMixe  
INTERVIEWER: PLEASE SPECIFY OTHER MIXED BACKGROUND  
Text: Maximum 60 characters

**ENDIF**

**ELSEIF (PEthnic = Asian) THEN**  
PWbAsian  
What is *(her/his)* cultural background? Is it Indian, Pakistani, Bangladeshi or any other Asian background?  
1 Indian  
2 Pakistani  
3 Bangladeshi  
4 Other asian background (SPECIFY AT NEXT QUESTION)

**IF (PWbAsian = Other) THEN**  
XPWbAsia  
INTERVIEWER: PLEASE SPECIFY OTHER ASIAN BACKGROUND.  
Text: Maximum 60 characters

**ENDIF**

**ELSEIF (PEthnic = Black) THEN**  
PWbBlack  
What is *(her/his)* cultural background? Is it Caribbean, African or any other Black background?  
1 Caribbean  
2 African  
3 Other black background (SPECIFY AT NEXT QUESTION)

**IF (PWbBlack = Other) THEN**  
XPWbBlac  
INTERVIEWER: PLEASE SPECIFY OTHER BLACK BACKGROUND.  
Text: Maximum 60 characters

**ENDIF**

**ENDIF**

**ENDIF**

*[Lang! TO LangMO ONLY ASKED ON ETHNIC MINORITY BOOST:]*

**Lang!**  
Can I check, which languages do you speak?  
CODE ALL THAT APPLY  
1 English  
2 Gujarati  
3 Hindi  
4 Punjabi  
5 Urdu  
6 Bengali  
7 Sylheti

CLASSIFICATION

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7 Antigua, Monserrat, and other Leeward Island  
8 Puerto Rico  
9 Trinidad and Tobago  
10 Barbados and other Windward Islands  
11 Other (PLEASE SPECIFY)

**IF (WheCar = Other) THEN**  
XWheCar  
INTERVIEWER: ENTER 'OTHER' COUNTRY.  
Text: Maximum 60 characters

**ENDIF**

**ENDIF**

**ENDIF**

**IF MarStat IN [married..PrtSame] THEN**  
PEthnic  
CARD C6  
To which of the ethnic groups on this card do you consider your *(wife/husband/partner)* belongs?  
1 White  
2 Mixed ethnic group  
3 Asian or Asian British  
4 Black or Black British  
5 Chinese  
6 Other ethnic group (SPECIFY AT NEXT QUESTION)

**IF (PEthnic = Other) THEN**  
INTERVIEWER: PLEASE SPECIFY OTHER ETHNIC GROUP.  
Text: Maximum 60 characters  
7 Middle Eastern

**ELSEIF (PEthnic = White) THEN**  
PWWhWhite  
What is *(her/his)* cultural background? Is it British, Irish or any other White background?  
1 British  
2 Irish  
3 Other white background (SPECIFY AT NEXT QUESTION)

**IF (PWWhWhite = Other) THEN**  
XPWWhWhit  
INTERVIEWER: PLEASE SPECIFY OTHER WHITE BACKGROUND.  
Text: Maximum 60 characters

**ENDIF**

**ELSEIF (PEthnic = Mixed) THEN**  
PWWhMixed  
What is *(her/his)* cultural background? Is it White British and Black Caribbean, White British and Black African, White British and Asian, or any other mixed background?  
1 White British and Black Caribbean  
2 White British and Black African

ENDIF

IF ((Phone = Yes) OR PhonAcc IN [Home..work]) THEN

PhoneNo

A few interviews on any survey are checked by a supervisor to make sure that people are satisfied with the way the interview was carried out. In case my supervisor needs to contact you, it would be helpful if we could have your telephone number.

- 1 Number given - RECORD ON ARF
- 2 Number refused

ENDIF

IntAgain

We may be doing surveys on similar subjects in the future and we may wish to include you again. Would this be all right?

- 1 Yes
- 2 No

8 Patois/Creole

9 French

10 Other (SPECIFY)

IF Lang1 = Other THEN

INTERVIEWER: PLEASE SPECIFY OTHER BLACK BACKGROUND.

Text: Maximum 60 characters

11 Yoruba

12 Twi/Ga

13 Swahili

14 Somali

15 Arabic

16 Other European Language

17 Other African Language (e.g. Ibo, Shona)

18 Other Asian Language (e.g. Hinko, Canton)

IF Lang1.CARDINAL &gt; 1 THEN

LangM

Which do you consider is your main spoken language? CODE ONE ONLY.

1 English,

2 Gujarati,

3 Hindi,

4 Punjabi,

5 Urdu,

6 Bengali,

7 Sylheti,

8 Patois/Creole,

9 French,

10 Other (specify)

IF LangM = Other THEN

LangMO

WRITE IN MAIN SPOKEN LANGUAGE.: STRING[60]

ENDIF

ENDIF

ENDIF

Phone

Is there a telephone in (your part of) this accommodation?

1 Yes

2 No

IF (Phone = No) THEN

PhonAcc

Do you have easy access to a phone where you can receive incoming calls?

IF YES, ASK: Is this a home or a work number?

IF BOTH, CODE HOME ONLY.

1 Yes - home

2 Yes - work

3 No

Urine sample request*[URINE SAMPLING ONLY CONDUCTED IN GENERAL POPULATION SAMPLE POINTS:]*

**IF (UrPoint = Yes) AND ((SCElig = Yes) AND Respondent is aged 18 or over)) THEN**

**UrineInt**

There is a separate part of the research for which we would like to ask for your cooperation. It is to provide a small urine sample. It will be sent to University College London Hospital, where it will be tested for Chlamydia. Chlamydia is an infection which can be passed on through sexual contact. This leaflet gives you more information about the test.

**HAND URINE TEST INFORMATION LEAFLET TO RESPONDENT.**

- 1 Continue

**UrineResp**

Would you be willing to provide a small urine sample?

- 1 Respondent agreed to provide
- 2 Respondent refused

**IF (UrineResp = Refused) THEN**

**UrineRef**

Why did respondent refuse?

Text: Maximum 100 characters

- 1 No reason for test 'not at risk/practice safe sex/could not be infected/had only one partner for long time
- 2 Worried about confidentiality/use of results/insurance problems
- 3 Respondent has already been tested
- 4 Respondent does not want to know result
- 5 Interview was not conducted in respondent's home
- 6 No time
- 7 Too personal
- 8 Respondent would not participate in these types of tests with non-medical people/would only do it for a doctor/nurse
- 9 No reason given/just doesn't want to
- 10 Other reason given (final list)

**ELSEIF (UrineResp = Agreed) THEN**

**UrineCons**

**RESPONDENT TO COMPLETE AND SIGN URINE TEST CONSENT FORM.**

- 1 Continue

**IfAnti**

Can I just check, have you taken any antibiotics in the last 7 days?

- 1 Yes
- 2 No
- 3 Don't know/not sure

**IF (IfAnti = DKnow) THEN**

**WhaAnti**

Can I see the container of any medicine you think might be an antibiotic and which you have taken in the last 7 days?

**INTERVIEWER: WRITE NAME OF MEDICINE ON THE URINE TEST RECORD FORM.**

- 1 NAME OF DRUG WRITTEN ON URINE TEST RECORD FORM
- 2 NAME OF DRUG NOT PROVIDED BY RESPONDENT

**ENDIF**

**UrineLab**

**WRITE SERIAL NUMBER AND RESPONDENT'S AGE AND SEX ON THE LABEL. THEN WRITE SERIAL NUMBER AND RESPONDENT'S AGE AND CODE SEX AND ANTIBIOTICS ON THE URINE TEST RECORD FORM.**

**Serial Number: Chkl Age: Antibiotics :**

**ATTACH THE LABEL TO THE URINE BOTTLE.**

- 1 Continue

**UrineSamp**

**INTERVIEWER CODE:**

- 1 Urine sample provided
- 2 Sample NOT provided

**IF (UrineSamp = NotPr) THEN**

**NoSamp**

Why was urine sample not provided?

Text: Maximum 100 characters

**ELSEIF (UrineSamp = Provided) THEN**

**UrPack**

**ASK RESPONDENT TO CHECK THAT BOTTLE TOP IS TIGHTLY SCREWED.**

**GET RESPONDENT TO PLACE URINE SAMPLE BOTTLE IN PLASTIC TUBE AND CLOSE TUBE.**

**PLACE THE TUBE SECURELY IN THE PACKAGING.**

- 1 Continue

**ENDIF**

**ELSE**

**NotUrine**

**A URINE SAMPLE IS NOT REQUIRED FOR THIS RESPONDENT.**

**TYPE 1 AND CLOSE INTERVIEW.**

- 1 Continue

**ENDIF**

**Interviewer Administration****IntNo**

Please enter the first four digits of your interviewer number.

Text: Maximum 4 characters

**IssNo**

Issue number

Range: 1..7

**HStatus**

Current Interview Status.

- 1 No work done yet
- 2 Calls made but no contact
- 3 Contact made, no work yet done on questionnaire
- 4 Interview started/Any interviewing done.
- 5 Other - no interviewing required (eg. ineligible, refusal)

**Super**

INTERVIEWER TO COMPLETE AFTER LEAVING RESPONDENT'S HOUSE:

Was an Natsen supervisor with you for this interview?

- 1 Yes
- 2 No

**[IntLang TO IlangWh ASKED ONLY ON ETHNIC MINORITY BOOST]****IF (WhAsian = Indian OR WhAsian = Pakistani) THEN****IntLang**

Respondent was interviewed...

- 1 Wholly in English,
- 2 Partly in English, partly in another language,
- 3 Wholly in another language.

**IF IntLang IN {Part..Other} THEN****IlangWh**

"Which (other) language was used for this interview Apart\_Eng ":

- 1 Punjabi
- 2 Urdu

**ENDIF****ENDIF****Others**Were any other people (*apart from supervisor*) in the home at all during the interview?

- 1 Yes
- 2 No
- 3 Interview conducted outside (e.g. in garden, car)

**IF (Others = Yes) THEN****WhoThere**

Was anyone else present in the room, or passing through, or nearby during any part of the interview and (possibly) able to overhear?

- 1 Yes
- 2 No

**IF (WhoThere = Yes) THEN****D63**

Who was present/passing through etc... Spouse/partner?

- 1 Present throughout
- 2 Present some of time
- 3 May have overheard all/part
- 4 Passing through only
- 5 Not present (inc. not applicable)

**D64**

Who was present/passing through etc... Parents?

- 1 Present throughout
- 2 Present some of time
- 3 May have overheard all/part
- 4 Passing through only
- 5 Not present (inc. not applicable)

**D65**

Who was present/passing through etc... Child(ren) aged 0-5?

- 1 Present throughout
- 2 Present some of time
- 3 May have overheard all/part
- 4 Passing through only
- 5 Not present (inc. not applicable)

**D66**

Who was present/passing through etc... Child(ren) aged 6-15?

- 1 Present throughout
- 2 Present some of time
- 3 May have overheard all/part
- 4 Passing through only
- 5 Not present (inc. not applicable)

**D67**

Who was present/passing through etc... Young Adult(s) aged 16-21?

- 1 Present throughout
- 2 Present some of time
- 3 May have overheard all/part
- 4 Passing through only
- 5 Not present (inc. not applicable)

**D68**

Who was present/passing through etc... Other adult(s) aged 22 or more?

- 1 Present throughout
- 2 Present some of time
- 3 May have overheard all/part
- 4 Passing through only
- 5 Not present (inc. not applicable)

**ENDIF**

**ENDIF**

**SCSeen**  
Did anyone else in the household look at or discuss any part of the self-completion questionnaire/booklet during completion?  
1 Yes - looked at/read completed together  
2 Yes - discussed only  
3 No  
4 Questionnaire not completed

**ENDIF**

**LangProb**  
In your view, did the respondent have any difficulty during the interview because of...  
**...Language problems?**  
1 Yes, severe  
2 Yes, some  
3 No problem

**LitProb**  
In your view, did the respondent have any difficulty during the interview because of...  
**...Literacy problems?**  
1 Yes, severe  
2 Yes, some  
3 No problem

**CogProb**  
In your view, did the respondent have any difficulty during the interview because of...  
**...Other problems in understanding?**  
1 Yes, severe  
2 Yes, some  
3 No problem

**ReadCard**  
Did you need to read out any of the show cards?  
1 Yes, all/most  
2 Yes, some  
3 No

**Embarras**  
In your view, was the respondent...  
1 ...very embarrassed/ill at ease,  
2 somewhat embarrassed/ill at ease,  
3 only slightly embarrassed/ill at ease,  
4 or, not at all embarrassed/ill at ease?

**Diffcult**  
After you selected this person to be interviewed, how difficult was it to persuade (*him/her*) to take part?  
1 Very difficult  
2 Fairly difficult  
3 Not very difficult  
4 Not at all difficult

**MenuNote**  
Reminder/Note for opening menu.  
OPTIONAL: IF NOTHING TO SAY, JUST PRESS <Enter>  
ENTER HERE ANY USEFUL DETAILS YOU WISH TO APPEAR ON THE OPENING MENU.  
Text: Maximum 45 characters

**UrDate**  
When did you post the urine sample?  
ENTER DATE.  
DD/MM/YY

**TNC**  
ENTER TOTAL NUMBER OF CALLS MADE TO THIS HOUSEHOLD.  
Range: 0..20

**NOFDU**  
ENTER NUMBER OF OCCUPIED DWELLING UNITS COVERED BY THIS ADDRESS (ARF Q3).  
i) IF DEADWOOD OUTCOME CODES 01-08, ENTER '0'.  
ii) IF OFFICE REFUSAL (O/C 09), ENTER '1'.  
Range: 0..30

**DUSel**  
ENTER SELECTION CODE OF (*FIRST/SECOND/THIRD*) SELECTED DWELLING UNIT (ARF Q6/8).  
Range: 1..30

**IF FinOut IN [31..80] THEN**  
**NOFEllg**  
ENTER NUMBER OF PEOPLE AGED 16 - 44 (ARF Q11).  
Range: 0..20

**IF (NOFEllg > 1) THEN**  
**EligSel**  
ENTER 'PERSON NO.' OF SELECTED PERSON (ARF Q14).  
Range: 0..20

**IF FinOut IN [71..80] THEN**  
**NonSex**  
RECORD NON-RESPONDENT'S GENDER (ARF Q19a).  
1 Male  
2 Female  
8 Couldn't find out

**NonAge**  
RECORD NON-RESPONDENT'S AGE (ARF Q19b).  
1 16 - 24  
2 25 - 34  
3 35 - 44  
8 Couldn't find out

**ENDIF**

- 1 Yes
- 2 No

ENDIF

ENDIF

- AreaType
- TYPE OF AREA (ARF Q21).
- 1 Urban/city centre
- 2 Small country town centre
- 3 Suburban residential
- 4 Rural residential/village centre
- 5 Rural (agricultural with isolated dwellings or small hamlets)

- BldType
- PREDOMINANT RESIDENTIAL BUILDING TYPE (ARF Q22).
- 1 Terraced houses
- 2 Semi-detached houses
- 3 Detached houses
- 4 Mixed houses
- 5 Low rise flats (5 storey blocks or less)
- 6 High rise flats (blocks over 5 storeys)
- 7 Flats with commercial (flats/maisonettes over parades of shops)
- 8 Flats - mixed (high and low rise)
- 9 Mixed houses and flats

- TypDwell
- HOUSEHOLD DWELLING TYPE (ARF Q23).
- 1 Whole house/bungalow: detached
- 2 Whole house/bungalow: semi-detached
- 3 Whole house/bungalow: terraced
- 4 Purpose built flat/maisonette: basement - 3rd floor
- 5 Purpose built flat/maisonette: 4th floor or higher
- 6 Converted flat/maisonette part-house/rooms in house
- 7 Dwelling with business premises
- 8 Caravan/houseboat
- 9 Other (SPECIFY AT NEXT QUESTION)

IF (TypDwell = Other) THEN

TypDwOth

PLEASE SPECIFY OTHER DWELLING TYPE.

Text: Maximum 40 characters

ENDIF

- EthMix
- ETHNIC MIX OF AREA (ARF Q24).
- 1 Predominantly white
- 2 Predominantly black/brown
- 3 Mixed

